

Economic Development Assessment for the

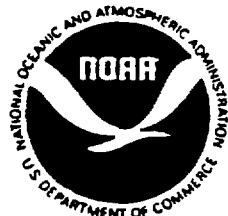


Phase I of II

Prepared by



In Cooperation with



NOAA Grant # NA NA270Z0105

TABLE OF CONTENTS

LETTER

EXECUTIVE SUMMARY

Section 1

TRENDS AFFECTING DEVELOPMENT

Section 2

Introduction	2-2
Competition	2-2
Initial Prospect Contact	2-2
Information Needs	2-3
Improving Probability of Success	2-6
National Trends	2-8
Plant Locations	2-8
Smaller Communities and Suburbs	2-12
Urban Decline in Central Cities	2-12
Corporate Downsizing	2-13
Flexible Manufacturing Networks	2-15
Industrial Development Bonds	2-16
NAFTA	2-16
Power Industry Changing	2-17
Labor	2-18
ISO 9000	2-19
Union Presence Declining	2-20
Job Growth Generators	2-22
The Economy	2-24
Defense Cutbacks	2-25
Service Sector	2-28
Manufacturing Sector	2-29
State Competition	2-30
Alabama	2-30
Georgia	2-32
North Carolina	2-35

CHARLESTON HARBOR STUDY AREA

Section 3

Overview	3-3
Location	3-3
Government	3-3
Transportation	3-3
Highways/Interstate	3-4
Climate	3-4
Colleges & Universities	3-4

Table of Contents - Continued

CONSTRAINTS AND POTENTIAL	Section 4
Base Closure	4-2
Economic Impact - Charleston Area	4-4
Military Base Reuse	4-7
Organization	4-8
Planning	4-12
Summary of Completed Military Base	4-16
Economic Adjustment Projects	4-16

INDUSTRIAL RECRUITMENT RESOURCES ASSESSMENT	Section 5
Workforce Talent Surplus	5-2
Infrastructure Availability	5-7
Water & Sewer	5-7
Electricity	5-11
Natural Gas	5-12
Port of Charleston	5-13
Real Estate Development Potential	5-14
Local, State and Federal Inducements	5-14
Federal Funding	5-14
State & Local Incentives	5-17

BIBLIOGRAPHY	Section 6
---------------------	------------------

APPENDIX

TABLES AND GRAPHICS

<i>Description</i>	<i>Page</i>
1. Initially Contact	2-2
2. Who Makes Contact?	2-3
3. Facility Siting Process	2-4
4. Combined Ratings of Site Selection Survey	2-5
5. Identifying Competitors	2-6
6. Job Growth versus Tax Burden	2-8
7. 1993 Top Business Climates	2-9
8. New Corporate Facilities and Expansion - 1991-1993	2-10
9. New Corporate Facilities and Expansions	2-11
10. Technology Driven Vertical De-Integration at IBM	2-14
11. U.S. Exports to and From Mexico	2-17
12. Labor Union Membership	2-20
13. Labor Force Assessment Categories	2-21
14. Job Growth Generators	2-23
15. Reductions in Defense Outlays	2-25
17. Estimated Private Sector Job Loss	2-26
18. Select Key Industry Outlook	2-27
19. Trends in Selected Service Industries	2-28
20. Fastest Growing Manufacturing Industries in 1994	2-29
21. Ten Slowest Growing Manufacturing Industries in 1994	2-29
22. Tri County Region	3-2
23. Occupational Employment	3-6
24. Population Projections	3-7
25. Educational Information	3-8
26. Labor Force	3-9
27. Projected Growth Rates	3-10
28. Hourly Wage Rates by Occupation	3-11
29. Cost of Living Index - Charleston MSA	3-26
30. Employment Impact	4-4
31. Payroll Impact	4-5
32. Indirect Economic Impact	4-6
33. A Survival Guide to Base Closings	4-7
34. Base Closure Process	4-11
35. Planning Process	4-15
36. Former Military Base Sites in North America	4-17
37. Summary of Completed Military 4-17	4-18
38. Base Economic Adjustment Projects - 1961 to 1991	5-2
39. GSO - Target Industries	5-3
40. Comparative Analysis by SIC Code	5-4
41. Comparative Analysis by SIC Code - Manufacturing	5-5
42. Major Employers	5-9
43. Waste Water Treatment Summary	5-10
44. Water System Treatment Summary	5-11
45. Comparative Electric Power Rates	5-12
46. Ranking of Gas Utilities by State	5-13
47. Spot Market Natural Gas: Posted Price	5-13

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

Planning Services Group, Inc. (PSG) was given the charge to perform an *Economic Development Assessment* for the Charleston Harbor Project for the greater Charleston area comprised of Berkeley, Dorchester and Charleston counties. The study is a two phased assessment with the following document representing Phase I. The evaluation process was centered around four distinct steps: 1) Document National, Regional and State Trends Affecting Development, 2) Research the Charleston Harbor Study Area and its Economy, 3) Analyze Constraints and Potentials, and 4) Develop an Industrial Recruitment Resources Assessment. The crux of the study, however, is centered around economic development issues, base reuse precedents and some of the competitive features inherent to the Tri-County region.

In order to understand the forces at work that will shape the future economy of the Tri-County region is important to identify the dynamics of the local economy. First, it is important for the greater Charleston community to realize the premier position that the state economic development agencies play in industrial recruitment. Over two-thirds of industrial prospects contact the state first. Usually the state has been asked to respond expeditiously to an inquiry and the relative success of any one community will rest on its ability to respond quickly, thoroughly and precisely according the requests tendered by the prospect. It is critical to establish very close relations with the state economic development agency for future success. By and large education and quality of life are becoming increasingly more and more important and in many instances outweigh cost considerations.

More and more industries are being recruited to the South. In spite of what several studies have professed regarding various incentives, the research literature demonstrates clearly that lower taxes have created more job recruitment at a rate of 65.0% higher than the higher taxed states. Don't be fooled that industry does not look at excessive tax burdens as a disincentives. This is merely propaganda promulgated by those states whose economies are hemorrhaging. Furthermore, three major factors will influence site selection in the coming years:

- Just In time (JIT) expectations will shift to the consumer
- Products will be massed customized
- Political policy will become more dynamic and unpredictable

In addition, smaller communities and suburbs are becoming more competitive than their larger city counterparts due to trends in decentralization, technology, minimalist philosophies and quality-of-life factors. As a result of this flight from the cites, urban decline is symptomatic of the problems facing many large communities. The greater Charleston region should be encouraged by this trend.

Corporate downsizing and reengineering will continue to affect location decisions as a result of increased global competition, lower profit margins, changes in technology and greater effectiveness of production processes because of mechanical and robotics advances. Virtual

companies will become more and more apparent and the distinct lines between company structures will become more fuzzy as the interdependence of manufacturing networks steadily increase. The North American Free Trade Agreement will only serve to accelerate this process even more.

A significant event on the horizon is the changing role of the electric power system. In the not to distant future, companies will be able to purchase power from virtually any source in the country to acquire the best deals. Similarly, the changing role of the American workforce will require increase skill levels and productivity improvements to counter the exodus of U.S. manufacturers shopping for cheaper labor costs off-shore. The challenge facing the Charleston region, as in many areas across the country, is to drastically improve the education process and worker skills. Here again, the state can be instrumental in providing training skills; however, only the local communities can solve the education dilemma.

Labor union clout has been declining over the past decade as smaller, leaner companies are required to hire workers and maintain an environment that fosters flexibility, quality and productivity. The Charleston region, as well as the state, enjoy a very low incidence of union membership and activity which is most attractive.

A significant statement regarding the old adage that 80.0% percent of job growth is provided by small industries is probably one of the most damaging concepts that has come out of well intended academic research. There is no evidence to support this statement. While small business startups should be encouraged as a matter of goodwill and responsible economic development strategies, they should not be favored at the expense of large industrial recruitment prospects. The fact is that most jobs are provided by large companies and are usually better paying with far greater security. If members in the community feel that they can curb the pending economic challenges associated with the base-closure with a "grow your own" philosophy, they will find that the problem will only worsen and deteriorate quickly. Large companies must be recruited.

The national economy, as well as the Charleston economy, is in a state of flux and headed for some very significant changes. Reductions in military spending will have the greatest impact on the Charleston area - as have already occurred in other areas around the country. Areas providing opportunities for potential recruitment due to expansions and/or relocations in the coming years will include machine tools (SIC 3541), electronic components (SIC 367), surgical appliances (SIC 3842), automotive parts and accessories (SIC 371A) and surgical and medical instruments (SIC 3841). These industries range in growth potential over the next years from 7.0% to over 24.0%.

The recruitment industry by the Tri-County region will face stiff competition from the surrounding states of North Carolina, Georgia and Alabama. Alabama's tax increment bonding and revenue bonding programs are one of the most attractive in the country with only Mississippi and Kentucky having anything similar. In addition, Georgia is matching many of

the job and investment tax credits that have been the forte of South Carolina for many years. Furthermore, North Carolina, long averse to providing hard incentives, has been considering passing legislation that would allow several types of incentives to compete with her more generous neighbors.

The economic impact of the Charleston region due to the military is significant. At present there are over 22,000 jobs that will be lost with a corresponding offset of only about 6,000 jobs from NAVALEX and the military hospital. The economic impact annually in terms of lost wages is staggering. Over \$1.0 billion dollars in direct and indirect wages will disappear.

There is an abundance of precedents throughout the country where communities have successfully used a realignment or base closing as an opportunity to stimulate economic development. The attached document devotes an entire section to discussing the process to plan for the pending closure as well as providing a summary of over 100 examples of such occurrences. Probably the most significant information in this section is the contact at each respective community who was, or still is, involved in the economic development activities.

The challenge facing the greater Charleston area is twofold. First the onset of the base closures and realignments will create a vacuum that will be difficult to fill in the near future. Additionally, the economy has traditionally relied on the military and tourism to provide jobs and general funds for the local tax base. As a result, the Tri-County economy is imbalanced and should concentrate its efforts not so much on recruiting industries that will be easy to attract but devote considerable effort in attracting companies that can provide greater balance to the economy in the long run. Areas where significant deficiencies exist include food & kindred products (SIC 20), paper and allied products (SIC 26), printing and publishing (SIC 27), Fabricated metal products (SIC 36), electronics and other electrical equipment (SIC 36) and instruments and related products (SIC 38). It should be noted that fabricated metal products, instruments and electronics are all poised for significant growth in the coming years.

Infrastructure capacity in the greater Charleston region is adequate, although the assimilative capacity of the rivers will be a concern to large users who wish to perform their own primary, secondary and tertiary treatment. It appears that this is a cause for concern with many of the existing industries. The electric power rates in the region are some of the lowest in the country although natural gas rates are some of the highest. The relationship between these two energy commodities is no doubt influenced by the fact that there is single ownership, distribution rights and control by one utility. While natural gas can be purchased on the spot market and transported at a reasonably low rate, most manufacturers will prefer to enter into long term contracts instead. This is a problem in the region.

The availability of both CSX and Norfolk Southern to service the region is an outstanding attribute. Both companies are considered premier operators in the rail industry who compete actively against each other. The result is lower costs and excellent service. Of considerable note is the short-line rail owned by the S.C. Rail Commission. The ability of the state to recruit

rail dependent firms by providing an economic rate structure is a strength that is unique to the region. Obviously, the port of Charleston only enhances these services. It is considered one of the best ports on the East Coast.

Federal funding is available for continued studies and economic development activities from the Office of Economic Adjustment. Additional funds can be obtained from a variety of sources and are itemized on page 5-17. Finally, the region should look at the Section 4-1-170 of the South Carolina Code of Laws and regulations regarding the establishment of multi-county business parks were the unique economic incentives available to one county can be offered in the county where the park resides, whether the latter is eligible or not.

The challenges facing the region are many; however, the opportunities are great to minimize the impact of the pending closures. The success of this will require a better understanding of the challenges facing the greater Charleston region and the magnitude of activity and effort which will be required to effect change.

TRENDS AFFECTING DEVELOPMENT

TRENDS AFFECTING DEVELOPMENT

INTRODUCTION

Understanding the trends affecting development must be considered in the context of how it affects local economic development. It is critical to understand not only the advantages and disadvantages of your particular region, but also identifying the strengths and weaknesses of the competition. As a result, the following text will address trends from the viewpoint of both the economic developer and the site selector.

Competition

Competition between development agencies is continually increasing in both the complexity and sophistication of services offered to prospective clients. South Carolina's State Development Board is recognized as one of the top economic development organizations in the country¹²; however, having an excellent state development group is not enough. It is crucial for local and regional development agencies to realize: 1) who is contacted for information, 2) the types of information required and 4) the conditions necessary to enhance the probability of success in recruiting a prospect.

Initial Prospect Contacts

State Development Groups are by far the preferred first point of contact during a site search. According to a recent study performed to determine who is contacted first in the siting process, 63.0% stated that state development organizations are the first point of contact.¹² As the following chart displays, a close working relationship between all development agencies is necessary in order to recruit prospects successfully.

INITIALLY CONTACTED

<i>State Development Groups.....</i>	<i>63.0%</i>
<i>Regional Development Groups.....</i>	<i>13.0%</i>
<i>Non-Metro Development Groups.....</i>	<i>11.0%</i>
<i>Metro-Area Development Groups.....</i>	<i>5.0%</i>
<i>Utility Companies.....</i>	<i>2.0%</i>
<i>Others (e.g., banks, railroads).....</i>	<i>5.0%</i>

Source: Conway Data survey of corporate real estate executives, December 1992-January 1993.
Percentages do not total 100.0% due to rounding

This graph indicates clearly that a community that elects to pursue economic development efforts without using all the available resources of the state, regional, utility and the adjoining local development groups will probably fail. Even if a community has an

outstanding program with highly capable individuals, the statistics prove without a doubt that the majority of potential leads will never materialize.

The above chart illustrates who is the first point of contact usually is; but, it does not indicate who usually makes the initial contact on behalf of the prospect nor who provides a referral contact regarding a potential contact. As the following charts illustrate, third party consultants are playing a greater role in the process. Furthermore, it demonstrates that no contact can be taken lightly.

WHO MAKES THE CONTACT?

<i>Company president or CEO.....</i>	<i>48.0%</i>
<i>Real estate or Const. dept...</i>	<i>22.0%</i>
<i>Consultant acting as agent...</i>	<i>16.0%</i>
<i>Human resources dept.....</i>	<i>2.0%</i>
<i>Other</i>	<i>12.0%</i>

WHO PROVIDES THE CONTACTS?

	<u>Frequently</u>	<u>Sometimes</u>	<u>Infrequently</u>
<i>Referral from other development group...</i>	<i>46.0%</i>	<i>33.0%</i>	<i>21.0%</i>
<i>Unsolicited letter or phone call</i>	<i>43.0%</i>	<i>37.0%</i>	<i>20.0%</i>
<i>Referral from Consultant.....</i>	<i>33.0%</i>	<i>46.0%</i>	<i>21.0%</i>
<i>Advertisement response.....</i>	<i>33.0%</i>	<i>46.0%</i>	<i>21.0%</i>
<i>Direct-Mail response.....</i>	<i>10.0%</i>	<i>36.0%</i>	<i>54.0%</i>

Source: Conway Data survey of economic development organizations, January 1993.

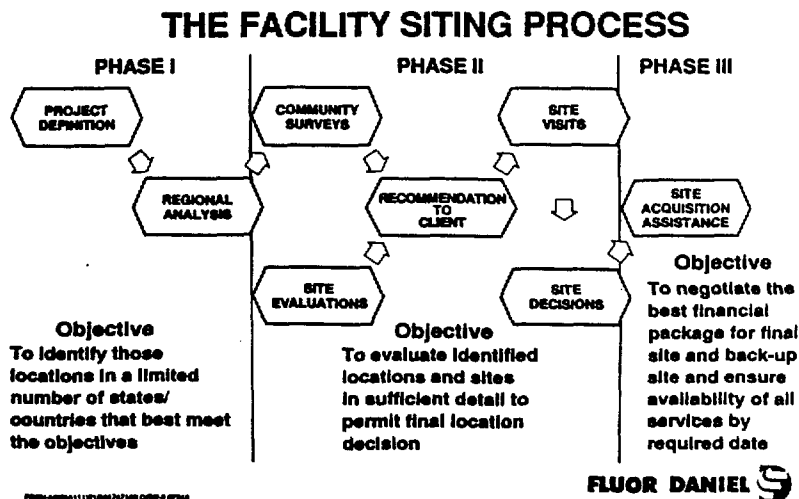
Information Needs

The allocation of resources necessary to pursue viable company prospects should be reviewed periodically to determine the most effective and efficient means to promote development. A tracking system dedicated to collecting data for later analysis in order to gauge the performance of recruitment efforts and to provide statistical insight into key recruitment activities will serve to focus development efforts. Powerful computer programs are available now that have changed an arduous, time consuming task into a rather routine administrative function.

Many development agencies have a problem understanding the information needs of the client at a particular point in the site selection process. This is particularly true of technical issues regarding specific information requested of the client. In general, the information needs of the client begin with broad criteria that progress toward detailed specifics as the study progresses. A failure to recognize at what point the prospect is currently situated in the site selection process can greatly undermine the effectiveness of recruitment efforts.

Development groups have a wealth of data available to promote their respective areas. The amount and complexity of detailed information is an ever increasing phenomenon. The combined resources of the state, local utilities, railroads and local development groups has created a proliferation of site selection data that is extremely comprehensive. Unfortunately, many agencies measure the effectiveness of their development efforts by the volume and weight of the promotional literature that they disseminate. Very few agencies understand that prospects find excessive volumes of information almost overwhelming and at times disconcerting when the focus of their inquiry is very specific.

According to Fluor Daniel's Siting and Consulting Services Group, a typical site selection study is a series of sequential events that occur in a logical and orderly process¹⁴ The following graphic illustrates the site selection process they use:



information Needs Continuum

BROAD [REDACTED] SPECIFIC

Not only is it essential to understand where the prospect is in the siting process, it is also important to understand the types of information that is needed. "Too many times state and community economic development agencies provide information *they* feel is important as a *substitute* for the information requested by the client."¹³

Generally speaking, the importance of specific location criteria usually depends on where the prospect is in the site selection process. As the previous graphic illustrates, certain information is needed at certain times in the site selection process. Inundating a client with information regarding incentives or site data while ignoring other key information needs is often construed as a lack of cooperation or an absence of the particular location ingredient. A study performed to determine the relative importance of location factors illustrate the importance of certain criteria:

COMBINED RATINGS* OF SITE SELECTION SURVEY

SITE SELECTION FACTORS

Labor Costs	90.3
Availability of long-term financing	88.9
Availability of skilled labor	88.8
Highway accessibility	87.1
Occupancy or construction costs	85.5
Energy availability	83.2
Tax Exemptions	83.0
State and local incentives	83.0
Availability of telecommunications services	80.7
Environmental regulations	77.4
Nearness to major markets	76.9
Low union profile	75.9
Availability of land	72.5
Rights-to-Work state	70.6
Cost of land	70.2
Worker/technical training program	60.8
Raw materials availability	60.1
Nearness to suppliers	58.8
Accessibility to major airport	57.4
Availability of unskilled labor	54.2
Nearness to technical university	32.6
Railroad service	28.6
Waterway or ocean port accessibility	20.6

* All figures are percentages of individuals responding "important" and "very important".
See Appendix ?

QUALITY OF LIFE FACTORS

Low crime rate	86.6
Health facilities	81.1
Housing costs	81.0
Ratings of public schools	80.5
Housing availability	76.8
Climate	62.0
Recreational opportunities	60.0
Cultural opportunities	59.3
Colleges and universities in the area	56.6

Source: Area development 1993 survey. Reference 1993 Site Selection Survey in Appendix ?.

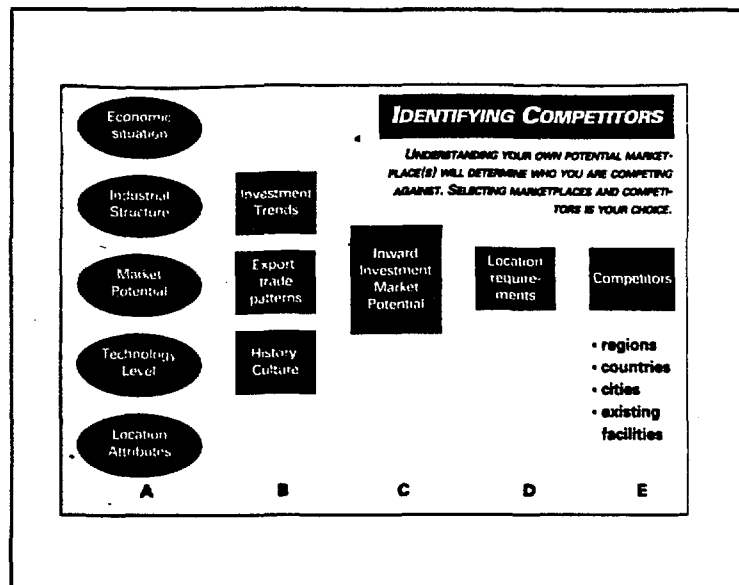
The information needs of the prospect are straight forward and simple. *"It is the information that has been requested"* - at a minimum. Any other information, while well intended, should not be an attempt to second guess or substitute the specific needs of the prospect. It can be a difficult task to determine where the prospect is in the site selection process, understand the technical requirements of their particular industry and answer inquiries succinctly, accurately and in simple easy to understand terms. Nevertheless, more information is not better and is actually detrimental if it does not address the prospect's specific information needs.

Improving Probability of Success

Competition between development agencies is continually increasing with new entrants causing a dramatic improvement of the quality and professionalism of economic development. The key to successful recruiting is more than simply providing information. Understanding your community or region and all the inherent strengths and weaknesses associated with it are equally as important. This basic understanding is the first key step to assessing the competition in order to develop an effective counter-marketing plan. The graphic to the right illustrates a schematic representing an assessment and identification of competitors. Column A represents the general information typically evaluated when looking at one's community.¹⁵ Essentially, this is an assessment of the economy, industry, market potential, level of technology, and local attributes.

The next column (Column B) represents a more regional perspective which evaluates the potential synergies with adjacent regions that have either similar or complementary location attributes. From an analysis of the community, the region and adjacent regions the assessment identifies the potential for investment by commercial and industrial prospects (Column C) to determine if a community/region has the essential ingredients necessary to successfully recruit industry and commerce. Column E is the crucial step in the assessment which is to understand who the competition is and their focus. Typically, most development agencies do not take a full accounting of their own strengths and weaknesses, and as a result spend too much time trying to recruit industries that they have little chance of landing. As a result, a significant number of communities end up targeting the same sectors, for example, pharmaceutical, automotive, telecommunication, electronics and computers.¹⁵ Most development groups do not fully assess the competitive advantage their community possesses so that the development strategies usually are neither well defined nor target industry focused.

To successfully combat the increased level of competition, communities/regions need to fully understand (in an *objective* and *unbiased* manner) their own community. This must be accomplished first before any attempt is made to assess another competitor



community. The assessment must include both the positive and negative. Then, an economic development strategy focused on the inherent competitive advantages of the community will be an obvious and natural outgrowth of this process.

NATIONAL TRENDS

Plant Locations

The epicenter of new business activity seems to have shifted to the southern United States with indications that the midwest will have a resurgence.¹ The reasons given for this shift vary depending on whose asks the question. In years past, the prime motive to move south was centered around labor issues and an avoidance of organized labor. Textiles were the catalyst of this movement. In a few remote instances this is still true; however, important issues such as work ethic, business climate, changing technology, education and quality of life are becoming increasingly more important. Whatever the reason, the fact is that industry shifts are occurring. According to a business analysis performed by Business Week in February of 1994, job growth in the low-tax states over the last eight years has been a stunning 65.0% higher than in high tax states.⁸ The following table illustrates the creation of jobs from 1985-93 as compared to the average state and local taxes as a share of personal income.

JOB GROWTH VERSUS TAX BURDEN

<u>ANNUAL PERCENTAGE CHANGE IN PRIVATE EMPLOYMENT FROM 1985 TO 1993</u>				
13.3%	12.1%	12.7%	16.0%	21.9%
Alaska	California	Idaho	Colorado	Alabama
Arizona	Connecticut	Kansas	Delaware	Arkansas
Hawaii	Iowa	Louisiana	Georgia	Florida
Maine	Kentucky	Massachusetts	Illinois	Missouri
Minnesota	Michigan	Nebraska	Indiana	Montana
New Mexico	New Jersey	North Dakota	Maryland	Nevada
New York	Oregon	Ohio	Mississippi	New Hampshire
Vermont	Pennsylvania	Oklahoma	North Carolina	South Dakota
Wisconsin	Rhode Island	Utah	South Carolina	Tennessee
Wyoming	Washington	West Virginia	Texas	Virginia
13.9%	11.6%	11.1%	10.5%	9.5%
<u>AVERAGE STATE AND LOCAL TAXES AS SHARE OF PERSONAL INCOME IN 1992*</u>				
HIGH TAX STATES				LOW TAX STATES

SOURCE: Commerce Department, DRI/McGraw Hill, Business Week

Note: * Estimates

Political and economic pundits can argue the effectiveness of a lower tax burden as a means of stimulating economic development, but the statistics speak for themselves.

Other factors have contributed to the migration of industry to the south and southeast. Obviously, the perception of key decision makers in the site selection process has a great deal of influence. The following table provides interesting results regarding actual facility locations versus the perception of corporate executives.

1993 TOP BUSINESS CLIMATES

<u>Overall Ranking</u>	<u>State</u>	<u>1992 Facilities</u>	<u>1990-92 Facilities</u>	<u>1990-92 Facilities Per 1 Million Pop.</u>	<u>1990-92 Facilities Per 1,000 SQ. Mi.</u>	<u>Corporate Executive Survey</u>
1	North Carolina	1	2	1	2	1
2	South Carolina	11	12	5	6	3
3	Georgia	9	6	9	14	4
4	Texas	1	1	22	27	2
5	Tennessee	13	11	10	12	5
6	Indiana	8	10	13	8	8
7	Kentucky	12	9	4	9	10
8	Virginia	10	8	12	7	12
9	Florida	4	3	15	5	15
10	Alabama	15	7	2	10	16
11	Missouri	14	13	14	23	13
12	Nevada	21	28	8	37	7
13	Ohio	3	4	11	3	26
14	Iowa	23	24	21	30	9
15	Louisiana	6	18	18	18	19
16	Arizona	27	26	27	36	6
17	Mississippi	19	15	3	16	22
18	Wisconsin	7	16	17	21	21
19	Illinois	20	14	30	19	18
20	California	5	5	38	26	22

Source: Conway Data's New Plant database and June-July survey of corporate real estate directors.

Of those manufacturers who plan to relocate or expand their companies in the next 4 years there seems to be a definite preference for the South Atlantic and the Midwest¹⁷ according to another recent study. The reasons for this vary, but by and large labor cost and availability of skilled work force seems to be one of the major forces shaping future plant locations. In addition, lowering capital investment is another important factor due to the increased competitiveness between states and communities regarding incentives. All this points toward the maintaining lower costs and achieving higher quality to remain competitive. State and local developers are not only competing among themselves, they are competing on a global scale.

The rankings in the above chart clearly illustrate that corporate executives expect significant growth in the southeast much greater than any region. Similarly, the preceding chart illustrates the increase in economic activity on a regional basis seems to indicate a cause and effect relationship. Interestingly enough, the most recent survey to determine where new corporate facilities and expansions took place from 1991 through 1993 clearly show that the trend will probably continue with reasonable certainty.

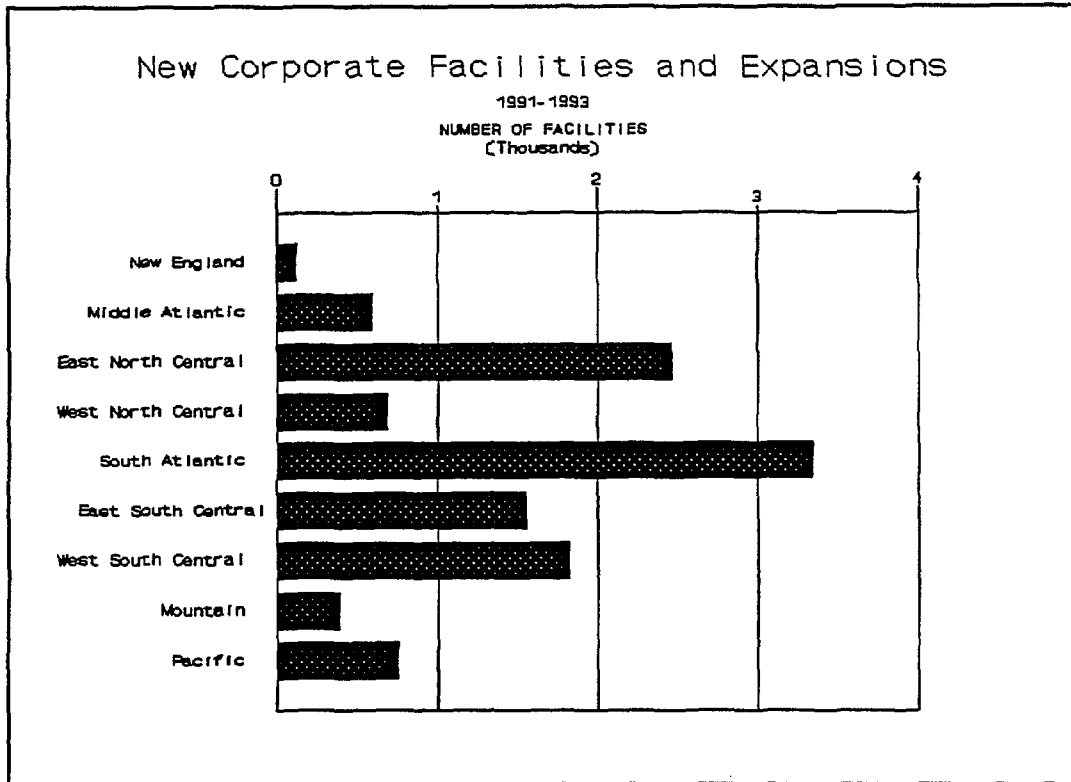
New Corporate Facilities and Expansions - 1991-1993

	93 NEW MFG.	91-93 NEW MFG.	1993 MFG. EXP.	91-93 MFG. EXP.	1993 OTHER FACIL.	93-93 OTHER FACIL.	1993 NON- U.S.	91-93 NON- U.S.	1993 TOTAL	1993 TOTAL
NEW ENGLAND										
Connecticut	2	9	2	5	2	10	0	0	6	24
Maine	2	3	1	2	0	2	0	0	3	7
Massachusetts	7	14	5	7	4	16	0	2	16	37
New Hampshire	7	10	0	6	2	0	3	3	9	17
Rhode Island	1	9	0	5	1	3	0	3	20	17
Vermont	2	6	1	3	2	5	0	3	5	14
Region Total	21	51	9	27	10	38	2	11	40	116
MIDDLE ATLANTIC										
New Jersey	12	25	6	35	27	57	3	5	45	117
New York	13	67	38	81	36	96	5	16	87	244
Pennsylvania	38	72	22	46	51	109	6	15	111	227
Region Total	63	164	66	162	114	262	14	36	243	588
EAST NORTH CENTRAL										
Illinois	17	65	17	54	30	88	5	18	64	207
Indiana	41	119	60	227	21	70	2	24	122	416
Michigan	29	75	35	75	26	449	2	14	90	199
Ohio	153	355	314	594	222	360	20	41	689	1,309
Wisconsin	39	149	27	121	12	62	1	7	78	332
Region Total	279	763	453	1,071	311	629	30	104	1,043	2,463
WEST NORTH CENTRAL										
Iowa	23	69	22	61	23	54	0	5	68	184
Kansas	10	34	6	31	6	18	0	2	22	83
Minnesota	8	25	10	21	10	15	0	0	2	61
Missouri	46	106	35	107	14	53	1	3	95	266
Nebraska	3	13	6	15	2	5	1	2	11	33
North Dakota	3	13	6	15	2	5	1	2	11	33
South Dakota	5	14	6	18	4	10	0	0	15	42
Region Total	98	273	85	256	60	157	4	12	243	686
SOUTH ATLANTIC										
Delaware	1	6	0	3	1	6	0	1	2	15
Dist. of Columbia	0	0	0	0	3	9	0	0	3	9
Florida	88	237	64	215	134	381	16	50	286	833
Georgia	39	162	25	108	39	162	11	34	103	432
Maryland	28	46	5	11	18	41	3	6	51	98
North Carolina	118	375	165	467	93	247	27	110	376	1,089
South Carolina	58	144	55	172	18	54	22	48	131	370
Virginia	40	108	53	134	51	143	7	26	144	385
West Virginia	11	33	23	60	5	16	0	1	39	109
Region Total	383	1,111	390	1,170	362	1,059	86	276	1,135	3,340
EAST SOUTH CENTRAL										
Alabama	29	103	32	215	12	36	3	15	73	354
Kentucky	39	133	106	332	21	51	2	9	166	516
Mississippi	16	84	34	254	14	45	0	1	64	383
Tennessee	40	113	46	108	25	78	9	21	111	229
Region Total	124	433	218	909	72	210	14	46	414	1,552
WEST SOUTH CENTRAL										
Arkansas	26	64	36	90	4	15	2	7	66	169
Louisiana	27	93	128	246	11	43	1	9	166	382
Oklahoma	26	86	23	103	8	30	0	2	54	219
Texas	120	356	92	319	174	378	7	43	386	1,053
Region Total	196	599	279	758	198	466	10	61	672	1,823
MOUNTAIN										
Arizona	11	40	1	11	12	31	2	4	24	82
Colorado	6	25	3	8	9	23	2	5	18	67
Idaho	2	7	4	5	2	8	0	0	8	20
Montana	0	1	0	0	0	0	0	0	0	1
Nevada	11	53	1	11	11	49	2	2	23	113
New Mexico	9	12	2	5	6	10	2	3	17	27
Utah	12	35	2	10	14	24	0	0	28	69
Wyoming	1	6	0	2	1	2	0	1	2	10
Region Total	52	179	13	52	55	158	8	15	120	389
PACIFIC										
Alaska	0	0	0	0	2	7	1	2	2	7
California	70	232	25	59	103	296	10	30	198	587
Hawaii	0	0	0	0	0	0	0	0	0	0
Oregon	12	31	5	12	4	17	2	7	21	60
Washington	16	44	7	19	7	36	3	10	30	99
Region Total	98	307	37	90	116	356	16	49	251	753
US Totals	1,314	3,880	1,550	4,495	1,297	3,335	184	610	4,161	1,170

SOURCE: Site Selection Magazine, February 1994, pp 19.

NOTE: NON-U.S. facilities are broken out separately for analysis purposes. However, NON-US facilities also are included in the totals for NEW MFG., MFG., MFG.

EXP. and OTHER facilities, as well as in the overall totals for 1993 and 1991-93.



A recent study by Barkley and Hinschberger confirms this continuing trend stating that "locational changes from traditional industrial areas tend to favor the south and the West¹⁸ and will continue to do so for the next decade.

As few as 15-20 years ago most site selection decisions were based on costs and cutting costs meant cheap labor, utilities, transportation and taxes. Today, however, location factors are shifting from quantitative issues to qualitative issues. These issues include labor skills, experience and attitude, quality of life, business climate, political risk, government regulations and customer requirements.²⁴ According to Shriner of PHH Fantus there are three major issues that will influence future site selection decisions:

- **Just in time (JIT) expectations will shift to the consumer.** As differences between products and services continue to evaporate, customer service will even more important. Customers will have to be serviced overnight which will require multiple, interdependent production/service centers.
- **Products will be mass customized.** To remain competitive, organizations will need to deliver precisely what customers want. This will in turn require far more interaction between product design and production. Organizations will require extreme flexibility of all employees and management in adapting to near constant change.
- **Political policy will become more dynamic and unpredictable.** Continually changing government policy can put unwary organizations at risk

Smaller Communities and the Suburbs

A new trend is emerging in corporate locations and relocations . This trend or concept is called "edge cities."⁵ It includes a subset of about 200 to 300 small and mid tier cities that are becoming significant location alternatives in preference to major metropolitan areas. According to a book called *The New Corporate Frontier: the Big Move to Small Town U.S.A*⁵, four significant features characterize this phenomenon:

- *More and more companies are locating in small towns. That location pattern reflects the larger global trend of decentralization, political, economic and organizational power.*
- *Technology is another major factor facilitating the move to small towns. A new electronic heartland is emerging, where high powered technology allows companies in even the remotest locations to carefully monitor world-wide operations*
- *The small town location strategy reflects the minimalist revolution, the recognition that size and verticality are no longer automatically positive attributes.*
- *The proximity of the company and community allows firms located in small towns to more directly address quality-of-life problems and issues.*

No longer are large metropolitan areas such as New York, Boston, Los Angeles, Houston or other large conurbations considered the standard by which communities are measured.

Urban Decline in Central Cities

Economic conditions in the largest urban centers have been and are continuing to deteriorate. As of October 1993, the unemployment rate in the nation's largest 25 cities stood at 7.8% compared to a national average of about 6.4-6.5%.²³ Lost jobs in these same cities is estimated to be approximately 850,000 over the last four years.

Large cities face two disadvantages in attracting jobs today. The first is the ever upward spiraling level of competition from the states which have a tendency to lure manufacturers to more urban or rural areas. Fiscally troubled cities have trouble matching the incentives offered by competing states. Since 1980, federal aid to cities has been sliced in half from \$47.0 million to \$24.0 million. This decline has caused an exodus of residents which has further compounded problems by further erosion of the tax base. In 1980, cities derived 63.0% of total revenues from local sources. This has grown to about 71.0% today.

The second problem, a direct result of economic erosion of the cities, is crime. The crime rate was 62.0 higher in the major cities compared to the national average. This

difficult problem to correct is, nonetheless, an essential ingredient in stemming the flow of urban decline for cities wishing to promote economic development. Referencing Appendix 1 titled "1993 Site Selection Survey", 85.0% of respondents considered a low crime rate either very important or important.

Corporate Downsizing and Restructuring

The corporate buzzword for company restructuring these days has been called "re-engineering, downsizing, streamlining" and a host of other names which all mean the same thing: companies of all sizes are looking for "salvation not just in new locations and smarter workforces but in the reinvention, or reengineering of how they produce their products and relate to their customers."² Greater emphasis has been placed on total quality management, customer service and increased competitiveness in the market place. Corporate America is constantly searching in an effort to streamline operations to increase profitability and competitiveness in the marketplace.

"The investment boom of the 1990's has been a distinct anti-job bias. A lot of the spending has been for labor saving, productivity enhancing and information technologies."²⁰ The trend for many existing industries is to incorporate a relocation into the their quest for achieving greater competitiveness. Opportunities present themselves to economic development professionals for companies who have announced or who are potential candidates for reorganizations and/or restructuring.

There are various reasons for industry restructuring with the following among the most prominent¹⁹:

- *Increased International trade has exposed consumers to a wide variety of products.*
- *Increased competition has reduced profitability, and thus the availability of capital for integrated, mass production methods, an alternative most advantageous to the specialized producer.*
- *Technological change and the changing preferences of the consumer have greatly shortened the product life cycles of many products.*
- *The diffusion of microprocessors and robotics technology has reduced the minimum efficient size of plants with respect to employees.*

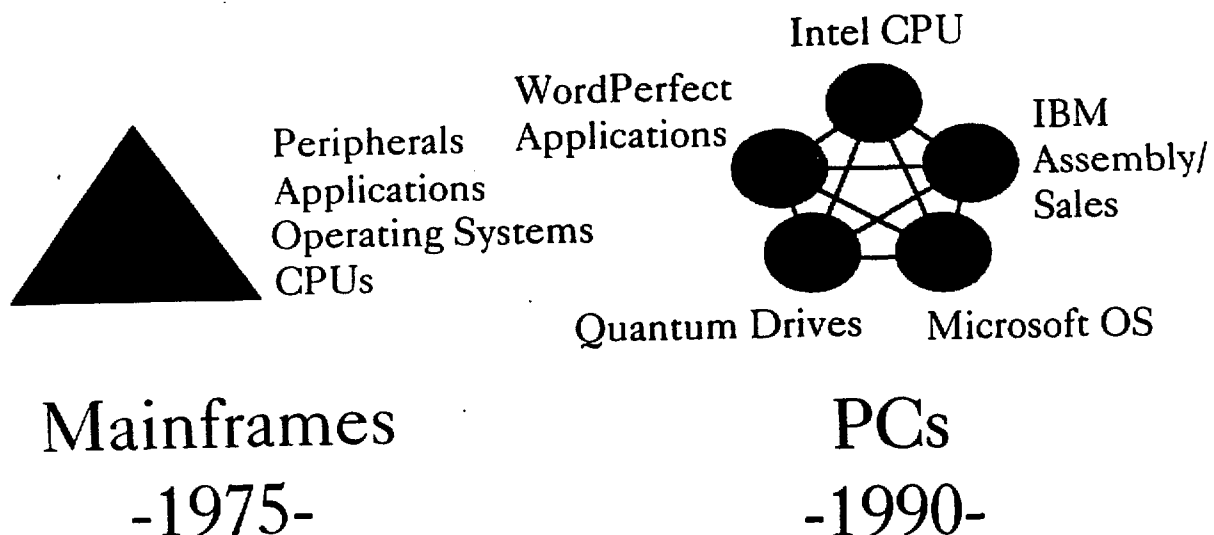
"American manufacturing is restructuring toward smaller, more specialized firms. This shift toward vertically disintegrated organizations and small batch flexible production techniques has altered the input and location requirements of firms. A greater premium is now placed on labor and proximity to markets and business services."¹⁸

Unfortunately, one of side effects of the last decade has been the diminishing role of skilled workers. Examination of the table on page 2-27 titled "Select Key Industry Outlook" shows that the only industries showing substantial gains are primarily in the services sector, although health

care, software/data processing, pharmaceutical and food\tobacco have shown modest increases. The profile of job creation in the United States in the last decade has been skewed toward low value-added services with low pay, poor benefits and little knowledge generation.²¹

The best analogy of what is happening in industry is the representative graphic below. At one time IBM was a totally vertically integrated industry with research and development, manufacturing, sales and other organizational and operational functions completely contained within the IBM corporate structure. They produced their own equipment, wrote their own programs and were almost a virtual monopoly. In 1975 IBM mainframes required the total commitment of user resources toward IBM product support. Of course, in the 1990's, personal computers and the proliferation of quality competition has totally restructured the industry. Changes in technology have not only changed the market place, it has changed the way IBM must conduct business if it is to survive. This same vertical deintegration has happened in the automotive, heavy equipment and electronics manufacturing sectors and is steadily gaining momentum in the non-traditional sectors such as pharmaceuticals and biotechnology with contract research organizations(CRO's) and contract manufacturing organizations (CMO's).

Technology Driven Vertical De-Integration at IBM



Flexible Manufacturing Networks

A manufacturing network is a group of firms that cooperate in order to compete - that collaborate to achieve together what each cannot alone. While they have not materialized in the classic sense in the US economy, they are a reality in the most prosperous regions of Europe. For example Jutland in Denmark, Saarland in Sweden, Baden-Wurttemberg in Germany and Emilia-Romagna in north-central Italy. These regions are dissimilar in their cultures, legal systems, politics and patterns of industrialization.³⁵

Economics in the United States has been dominated by the concept of mass production that achieves stability in three ways:

- Its very size maximizes economies of scale in production and commercialization.
- It is powerful enough to create demand for the products it supplies, using sophisticated marketing strategies.
- Its high and predictable rate of profit enables it to invest steadily in the development of new products and labor-savings technology.

As discussed in the previous paragraphs, downsizing is the result of the ever present onslaught of technology and global competition that has made obsolete the notion of standard-product life cycles and self contained US dominated markets. The principles of achieving "flexible manufacturing networks" is centered around the following concepts³⁵

BENEFITS OF FLEXIBLE MANUFACTURING NETWORKS

- *Share the mounting costs of research and development,*
- *Meld capabilities to produce new goods and services,*
- *Aggregate production to serve to serve large markets*
- *Reduce costs through joint purchases of raw materials or management services*
- *Acquire the expensive technologies they all need, and*
- *Increase market share and export earnings*

ACTION STEPS TO ACHIEVE CONCEPT IN THE US

- *Sectoral research to target potential networks,*
- *Identify and training "brokers" who are capable of bringing firms together to face and solve common problems,*
- *Public-private cooperation to create new industry "hubs" - the sectoral service projects around which manufacturing networks coalesce.*

Examination of the previous chart showing the deintegration of IBM as well as knowledge of the advent of automotive assembly versus manufacturing is testimony to the validity of this concept. It would be wise for communities to substitute the word "broker" with the word "local economic development professional". No longer can a community recruit firms to locate in their

community simply by offering cheap land, taxes and labor. Instead, communities must sell those factors that provide an advantage to manufacturers wishing to compete in a global economy.

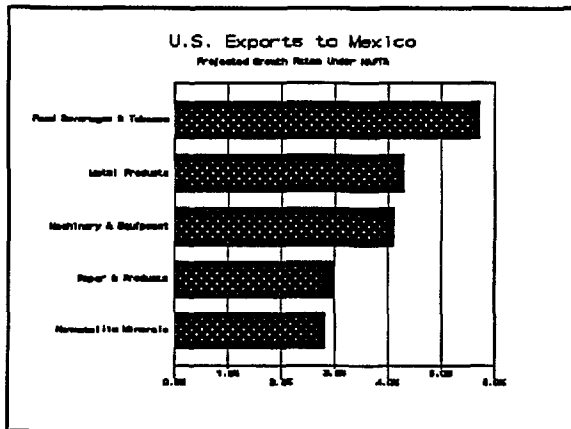
One simply has to review relatively recent economic historical developments to understand that this concept is not as new as they may seem. The Silicon Valley is an example of the proliferation of similar industries that thrived due to both formal and informal manufacturing networks. In addition, the Boston, Massachusetts region has shown a concentration of biotech startups and joint-ventures that have been the result of both intellectual concentrations and business research and development. Finally, the multitude of automotive suppliers along the I-75 corridor in both Tennessee and Kentucky are the result of automotive assembly practices of Toyota and Nissan as well as the presence of GM and other manufacturers in the region. The only difference is that the impetus for this development trend occurred as a result of business and industry initiatives as opposed to a public policy statement to pursue "flexible" manufacturing network" development.

Industrial Development Bonds

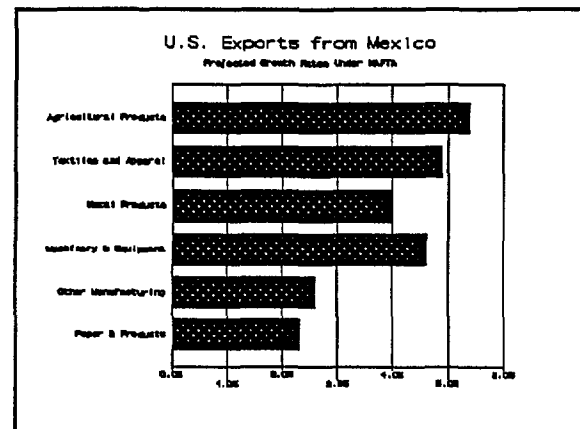
The United States Congress passed the Omnibus Budget Reconciliation Act of 1993 on August 5, 1993 which restored the authority for fully tax-exempt manufacturing industrial revenue bonds (IDB'S). Industrial Development Bonds have a ceiling of \$10.0 million far short of the \$20.0 million limit many had hoped for. A new provision waives the requirement that the bonds must be issued within one year after the facility is placed in service. Specifically, the provision states that the one-year placed-in-service period does not expire before January 1, 1994 for property with respect to which this one year period otherwise would expire after June 30, 1992 and before January 1, 1993. The restoration of IDB's will be retroactive to July 1, 1992. It should be understood that these bonds are no longer available to the banking industry and that the recipient of the bond cannot have total investment of over \$10.0 million dollars and must pass the principal benefactor test.

North American Free Trade Agreement

According to Gary C. Hufbauer and Jeffrey J. Scott of the Institute for International Economics a net increase in American jobs will be realized amounting to about 170,000.⁹ Their rationale is in order for the United States to be more competitive globally, U.S. firms will be encouraged to make capital investments. Even though much of this investment would be in Mexico, the investment would be concentrated in the field of machinery and other capital equipment. Consequently, greater exports to Mexico and correspondingly new jobs in these sectors. The following graphic illustrates certain broad product categories expected to have significant growth rates to the year 2000.²²



Note: Average growth Rates (percent) 1993-2000
Source: DRI McGraw Hill



Note: Average growth Rates (percent) 1993-2000
Source: DRI McGraw Hill

Within the United States, industries along the border will probably gain the most from NAFTA. It is expected that those regions of the United States with higher than average concentrations of labor intensive manufacturing sectors may have limited growth opportunities.¹⁶ This will probably affect parts of New England and the southeastern United States. Traditional manufacturing sectors such as textiles, leather and lumber will be forced to compete with low cost Mexican labor.

NAFTA will create the world's largest market with a combined 6.5 trillion economy and 370.0 million people. This should accelerate the growth of U.S. Exports to Mexico.

Power Industry Changing

Large users of electricity may have the potential of locating in one state (such as South Carolina) yet purchasing power not from the local utility, but from a low cost producer in another state. This concept is known as "retail wheeling" and has been a considerable source of debate with the passage of the 1993 Energy Policy Act (EPACT). Retail wheeling is somewhat analogous to what is currently in place with the natural gas industry. In this scenario the end user purchases natural gas on the spot market at a given price per therm and pays a transportation fee for transmission of the gas along existing pipelines. In a similar fashion, it is assumed that large volumes of electricity will be purchased from utilities and transmitted across existing transmission lines with an associated fee.

The Energy Policy ACT specifically forbids the federal government from ordering "retail wheeling". The act, however, did not specifically spell out whether state utility commissions have the right to order retail wheeling without specific enabling legislation.⁷ It is expected that the states will take up the issue which may lead to a patchwork of experimental programs among and within states. Nevada lawmakers recently passed legislation which ordered the public service commission to consider retail wheeling. In Michigan, an administrative law judge's opinion in a case before the state regulators has questioned whether they have the authority to

order two detroit area utilities to create retail wheeling tariffs.

Law makers and utility regulators are currently considering retail wheeling in California, Illinois, Massachusetts, New Mexico, New York, Pennsylvania, South Carolina and Texas.

The problem now is one of regulation jurisdiction. According to the National Association of Regulatory Utility Commissioners, "It's very unclear as to who is supposed to have regulate what, and how in the way of direct transmission service by an electric utility to an end user or a group of end users."⁷

The states that are prepared to address this issue early up in the event that retail wheeling is allows will have a tremendous advantage recruiting and attracting energy intensive users, provided the total mix of location criteria are acceptable. In ten years it is expected that no significantly sized industrial customer will be served under the regulatory format as we know it. Instead, they will be negotiating contracts much like they do now with their telephone service now.¹⁰

Labor

Labor issues are not only a regional concern but a national one as well. Changes in the United States industrial composition and global competition coupled with advancing technology and corporate restructuring drastically affect the supply and demand curves of the U.S. workforce. According to a series of Wall Street articles there a four imperatives that will mold the contours of employment in the 1990's²⁵:

- **Global Competition** Lower compensation levels combined with reasonable work-force quality will expand the movement offshore. Well trained professionals, especially scientists, engineers and computer specialists are available at a fraction of their U.S. counterparts in countries such as India, China, Malaysia, Eastern Europe and Russia.
- **Technology Applications** Increases in technology is drastically reducing the need for workers in the distribution, manufacturing and service sectors. Increased automation is not only increasing productivity, it is also decreasing the demand for corresponding employment growth.
- **Reengineering/restructuring** Restructuring due to structural shifts in the industry (i.e. defense industry shrinkage, shifts away from mainframes,etc..) has cut out a significant number of jobs. In addition, reengineering leading to flatter, less hierarchical organizations with less costs

and increased profits are gaining impetus and being encourage by stockholders and Wall Street indicators.

- Temporary Work-force

Employment at temporary help agencies has increased by nearly 250,000 over the past year (1993). And the trend is not reserved only to clerical and low-skilled jobs.

The implications of the four imperatives portend the areas where economic development efforts must focus. Increased automation as a result of technology and the increased opportunity for lower cost offshore manufacturing capabilities are steadily replacing low skilled and semi-skilled manufacturing jobs in an ever-increasing insidious fashion. The future for low skilled and semi-skilled jobs is not good in spite of recent projections of increased hiring. According to Manpower, Inc. "hiring in U.S firms is expected to reach the highest level in five years by the second quarter of 1994"³⁰ The most prominent gains are expected to be in vehicle manufacturing, heavy equipment and aircraft manufacturing. This increase demand for these types of labor will lull states into thinking that economic development efforts with regard to work skills development can take a temporary respite. In contrast, the increased hiring activity will only be a short lived occurrence. Low skilled and semi-skilled manufacturing jobs are migrating offshore or attributing their demise to increased technology. Emphasis on upgrading the technical skills of the existing workforce through increased investment in vocational education and technical training will become an imperative. States and communities who invest in education, particularly regarding advanced technology processes and control systems will reap the benefits of this foresight.

ISO 9000 Certification

Increased interest in quality management is a key interest to companies wishing to relocate or expand. The latest quality initiative is the ISO 9000, developed by the International Standards Organization in 1987 and adopted by the European community in 1990 in an attempt to standardize the many different product-certification criteria of its member countries. In the face of global competition, many American companies will have to gain ISO 9000 certification or risk being shut out of the enormous European market. There are only a few hundred U.S. firms that have ISO 9000 certification compared to tens of thousands in Europe. ISO 9000 standards require that suppliers establish and maintain procedures to identify training needs and to implement work-force training programs for all personnel who perform activities that may affect quality. In those states that have an active jobs-training program integrated closely with an effective vocational training educational infrastructure, bridging this gap will be relatively easy even for smaller companies with limited resources. The same cannot be said for those states that do not.

The ISO initiative may not provide sufficient justification for the restructuring of local and state educational programs in and of itself; however, this is one of the many initiatives that is slowly

but steadily leveling the playing field against the United States in the global arena. Heretofore, U.S manufacturers have controlled the technology as well as the inputs into its development. This has already begun to change and will only accelerate in the future.

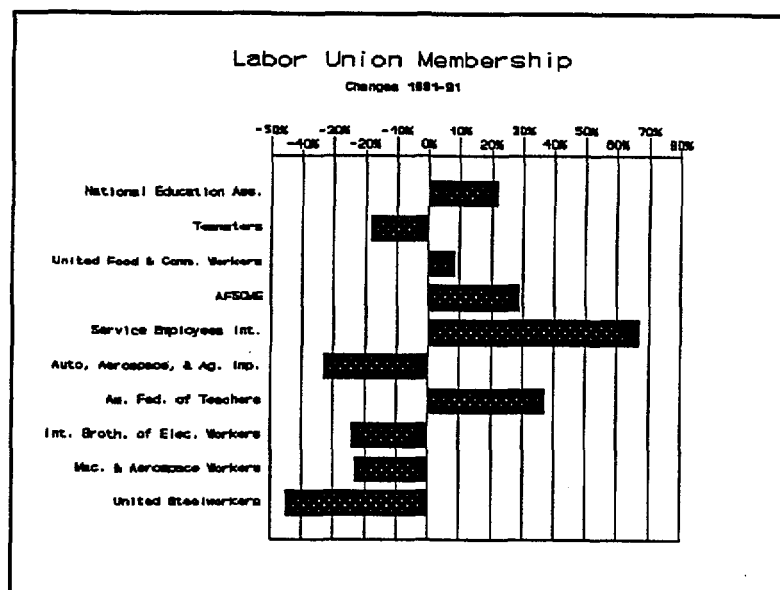
Sobering statistics that should cause local and state governments cause for extreme alarm are those two statistics:

- 1) 25.0% of the U.S. workforce lacks the basic reading, writing and math skills necessary in today's market.
- 2) More than 20.0% of Americans of working age have failed to complete high school.

These two factors alone are an embarrassing indictment of the U.S. labor force and education system when compared to other industrialized nations.

Union Presence Declining

At the end of World War II, union members accounted for more than 35.0% of all employed Americans. That figure stands at about 16.0 percent. According to Leo Troy of Rutgers University, labor union membership will decline to some 7.0 percent by the turn of the century.²⁶ If one takes an even closer examination of union membership, only about 11.0% of the private industry workforce is organized. The American Federation of State, County and Municipal Employees (AFSCME) and the American Federation of Teachers (AFT) makes up the other 5.0%.



Examination of the above chart shows the general trends in the traditional private sector manufacturing labor representation ranks. United Food and Commercial (UFCW), Auto, Aerospace and Agricultural Implement (AAAE), International Brotherhood of Electrical Workers (IBEW), Machinist and Aerospace Workers (MAW) and the Unites Steel Workers have all shown a steady decline since 1981 - 1991.

In spite of the decline of union membership and the perception of diminished clout, this factor is still important for manufacturers. In fact, it's more important now than ever. The increased competitiveness between firms requires a high degree of flexibility and mobility. Even though membership is declining, the importance of organized labor as a critical site selection factor is becoming increasingly more important.

Typically the types of data required and the level of investigation effort when assessing the labor force include 7 broad areas as indicated below:²⁷

LABOR FORCE ASSESSMENT CATEGORIES

<u>Labor Force Character</u>	<u>Skill Base</u>	<u>Salary and Benefit Practices</u>	<u>Work Force Flexibility</u>
Population	Industrial Mix	Private Surveys	Local Mfg. Techniques
Work Force Demographics	Companies Present	Bureau of Labor Statistics	Labor Laws
Employment	Emp. Service Registrants	National Data Services	Strike History
Unemployment	College Graduates	State & Local Surveys	NLRB Election Results
	Vo-Tech Graduates	Proprietary Data Base	Union HQ's
	Local Quality Programs		Local Quality Programs
 <u>Labor Quality/Productivity</u>	 <u>Training Support</u>	 <u>Transfers and out of Area Recruits/New Hires</u>	
Intercompany Comparisons	State Programs	Alternate Emp. Opportunities	
Experience of Local Mgt.	Local Facilities	Housing Availability	
Testimonials	Relocation Expenses	Cost of Living	
		Educational System	
		Advanced Educational Opportunities	
		Health Care	
		Quality of Life	
		Crime	

While all these factors are important, "*workforce flexibility*" and "*labor quality and productivity*" are key indicators of the ability of the indigenous workforce to change, adapt and grow within the dynamics of the market place.

It has been stated that changes in the "business world mindset - cooperation instead of confrontation, improvement over enforcement - are combining to render traditional unions

obsolete."²⁸ Mounting evidence, however, contradicts this assertion. The perception that the current Clinton Administration is "labor friendly", and the recognition that organizations efforts will have to change with the times is creating a "new breed of labor organizer"²⁷ The AFL-CIO has trained over 160 college educated "union recruiters" in 1993 whose methods have become more sophisticated and aggressive. The statistics for union membership will change; however, the importance of maintaining flexible workforce environment may be the most important issue facing manufacturers in the future.

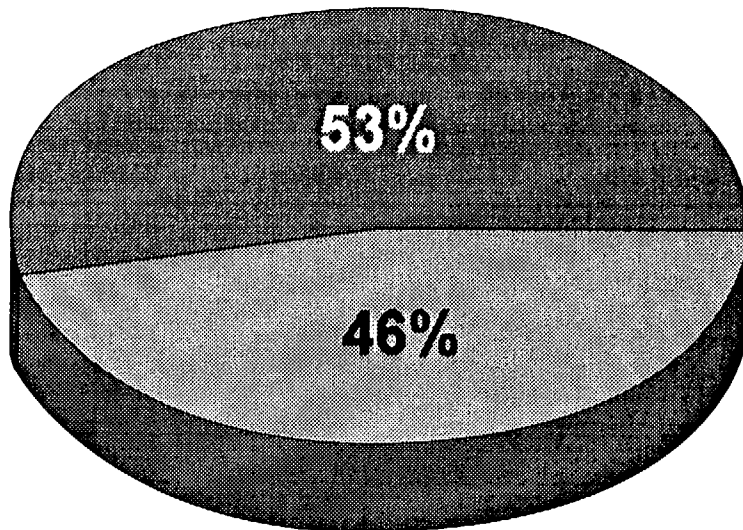
Job Growth Generators

A question that has been the source of considerable debate in communities across the United States for the past decade is "Should we recruit large companies or stress the *grow your own* economic development philosophy". This same question should be asked in the Charleston region. The widely held notion that small companies amount for over 80.0% of job growth in the United States is simply not true³⁷. Unfortunately a study by David Birch, an MIT researcher in 1987, concluded that 88.0% of all jobs generated between 1981 and 1985 were spawned by companies with fewer than 20 employees³⁸. Since that stunning announcement, a flurry of economic development policy initiatives have ensued to promote the development of small business. While this is commendable and, in the opinion of the consultant, should always remain a prime economic development policy objective of Charleston, it should not be emphasized to the detriment of policies that target large manufacturing firms. Several studies performed over the past 5 years have come to the same conclusion - large firms not only provide over 70.0% of new jobs but the new jobs provided by these firms are on average higher paying with better benefits and greater job security than their smaller company counterparts.³⁹

The implications of this study are clear, not only for Charleston, but for the surrounding counties as well. The greatest gains in job growth will be achieved through the active recruitment of firms who employ over 100 employees. Examination of the following graphic points out, even to the cynic of these studies, that regardless of how you define a "small versus large company", most jobs are in fact the result of large companies.

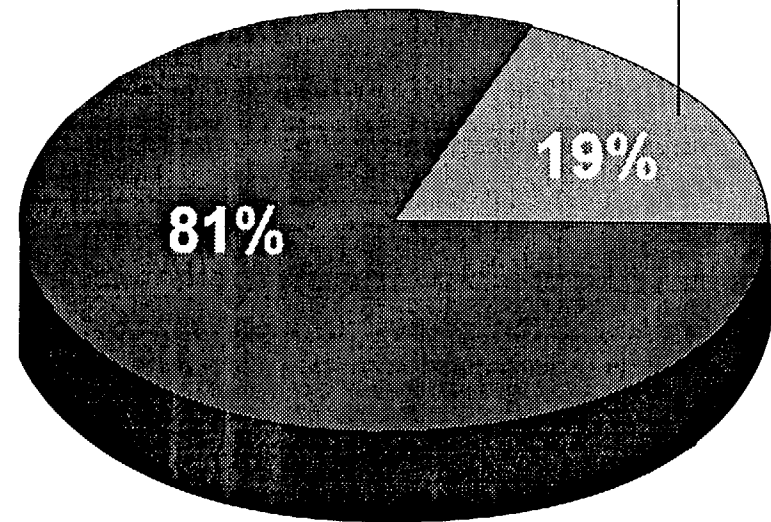
Job Creation 1972 - 1988

**Companies with greater
than 500 employees**



**Companies with less
than 500 employees**

**Companies with less
than 50 employees**



**Companies with greater
than 50 employees**

Source: Harvard Business Review, May-June 1994

The Economy

"The United States economy is not as robust as in prior years. Twenty years ago, the United States was still the world's dominant economic power. Now it is under challenge as never before from extremely able foreign competitors (principally Japan). United States commercial manufacturing is particularly under siege and will be hard put due to additional pressures as a result of defense spending cutbacks to take the place of defense industries, which are heavily tilted toward manufacturing. Declines in this sector are particularly costly because manufacturing provides well paid jobs, supports mostly privately funded research and development (R&D) and dominates international trade "²³ According to the Institute of Trend Research, the period of 1993 is a period of consolidation between two unequal rising trends. They project that there is a strong probability of significant economic gains in 1994 and 1995; however, 1996 and 1997 are likely to be years of back to back recession. Their advice to industry is to reduce debt and avoid over-expanding resources in 1995, and to reduce debt as much as possible between now and early 1996.

Business investments in new capital equipment and growth in demand for consumer durables are the major forces that will drive manufacturers real shipments in 1994 to the fastest rate of growth in 6 years. In addition, shipments of instruments and medical equipment will contribute to an escalation of manufacturing growth in 1994.

Factors considered to be the key constraints to combined growth in the United States are:

- Further corporate restructuring, limiting growth in employment and wages (related to this are uncertainties about the costs of businesses associated with the proposed health care reform package):
- Continued weakness in the commercial real estate market, which was heavily over built in the 1980's.
- Continued cutbacks in defense purchases, possibly on an accelerated basis, and limitation on spending by governments at all levels due to budget constraints; and
- Weaker than expected recoveries in the economies of some major U.S. trading partners, especially Japan and Western Europe.

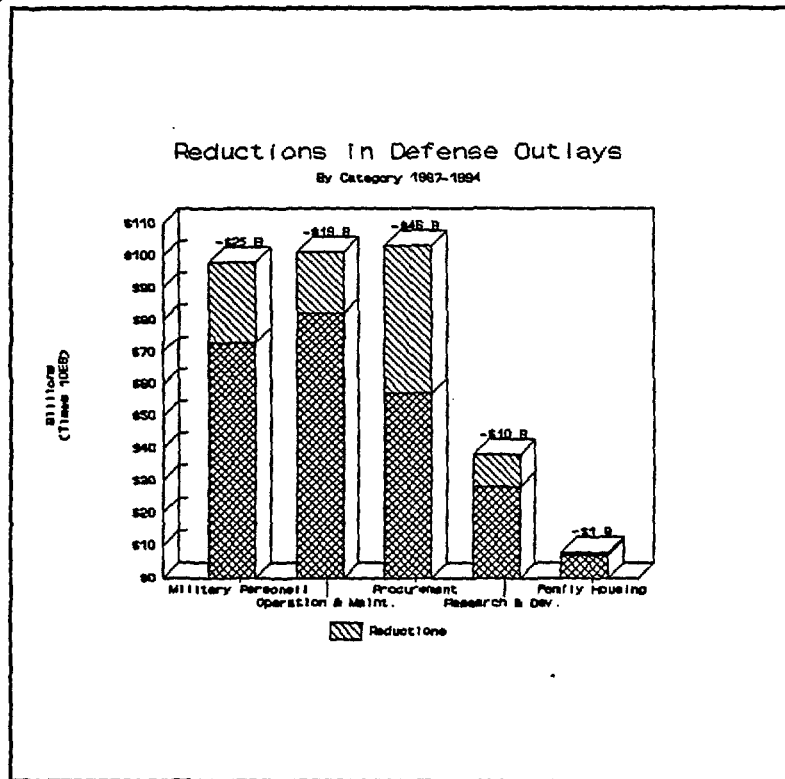
Defense Cutbacks

The dissolution of the Soviet Union and the end of the Cold War have significantly affected defense needs. This reduction in defense spending will have a dramatic affect on many state and local economies. Approximately half the defense related job losses in the United States are in eight states and many communities will be devastated by current and proposed military base closings. The following graphics indicate the level of defense spending cut backs and the private-sector job losses by category:

From an national perspective, comparatively speaking, far greater job displacements occurred during 1985-1989. During this period significant structural shifts in the economy occurred which resulted in 9.2 million workers losing their jobs due to plant closings, relocations, elimination of a position or shift, or slack work.³¹

The Office of Technology Assessment estimates that defense related job losses from 1991 to 1995 including the armed forces and the Department of Defense employment will approximate 1.4 million. The Defense Conversion Commission, however, estimates more conservatively that about 960,000 private sector jobs will be lost

between 1991-97.³² From this viewpoint the reductions do not seem as ominous. This is little solace for communities that will be affected. Nevertheless, from a comparative macro-perspective the cutbacks are not as dramatic they seem. The following graphic illustrates the private sector job losses that will be most affected.



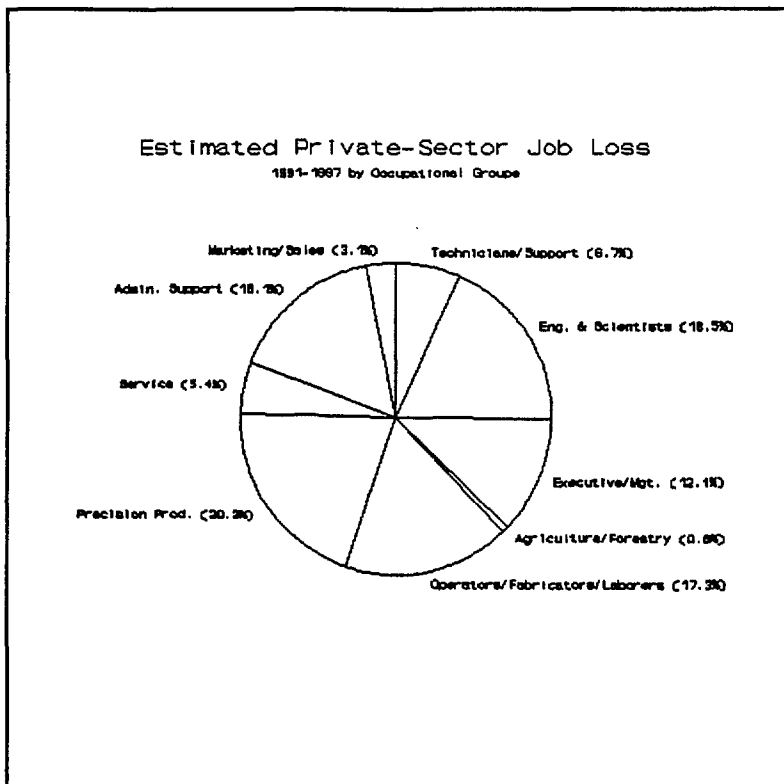
Those communities who experience massive layoffs in the private sector from companies losing large government contracts as well as communities whose economic base consists of manufacturing and service sectors dedicated to supporting the operations and maintenance activities of a military base will suffer the most with the former will be much more dramatic than the latter.

The severity of economic impact will depend to a large degree on the industrial diversity of the affected community and the amount of planning which has been initiated to absorb displaced workers. This includes both economic development and recruitment efforts and the conversion

of military oriented industries/facilities to fulfill a private sector needs. Phase II of this study will address suggestions for ways to adjust to the loss of jobs as well as potential utilization of the remaining facilities. There is an abundance of examples and precedent setting experiences throughout the United States of military conversion activities that have been successful.

In addition, there is a considerable level of Defense Economic Adjustment Programs (See Appendix ?) that provide information, planning assistance and grants to assist in the transition. For those communities who take advantage of the

available funding and link into the information network on how to best utilize the infrastructure left behind, there will be unparalleled opportunities. In many cases the infrastructure left behind such as airports, docking facilities, buildings and low-cost or free land is an asset that would probably never have been funded on its own. Furthermore, the specialized skills inherent to many military activities are another asset that can greatly enhance economic recruitment and development efforts.



SELECT KEY INDUSTRY OUTLOOK

Sector	Millions \$ Output		Employment		Thousands of 1993 \$'s per worker Productivity	
	1989	1994	1989	1994	1989	1994
MANUFACTURING						
Motor vehicles & parts	257.2	282.5	0.86	0.78	299.7	362.4
Defense	77.8	53.9	0.59	0.37	131.8	144.1
Machinery	416.5	448.1	3.23	2.86	129.1	156.6
Steel	80.6	83.5	0.46	0.40	174.6	209.7
Chemicals	226.7	243.9	0.84	0.81	269.3	300.3
Food & tobacco	422.5	457.9	1.69	1.69*	249.4	271.1
HIGH TECHNOLOGY						
Computers & office equipment	40.7	80.8	0.46	0.37	88.6	218.2
Software & data processing	74.4	91.4	1.85	2.27*	40.2	40.3
Semiconductors	21.2	32.3	0.25	0.22	84.7	144.7
Telecommunications	127.4	153.2	1.03	1.07*	123.7	143.2
Pharmaceuticals	57.5	75.1	0.23	0.27*	248.0	279.0
NATURAL RESOURCES						
Energy	281.8	284.8	0.68	0.59	412.7	479.5
Agriculture	220.2	252.4	3.71	3.79*	59.3	66.6
Forest products	228.7	245.8	1.45	1.39	157.5	176.8
SERVICES						
Retailing	1,677.4	1,843.9	14.55	14.67*	115.3	125.2
Wholesaling	1,801.5	1,940.4	6.57	6.50	274.2	288.5
Health care	58.3	690.3	8.36	10.16*	69.4	67.9
Transportation	364.2	405.0	2.78	3.76*	96.3	107.7
Restaurants	282.0	299.8	6.72	7.24*	41.8	41.4
Utilities	265.4	283.7	9.97	10.35*	226.2	274.1
Entertainment	117.7	125.5	1.72	2.00*	65.0	62.8
FINANCE						
Banking	187.3	199.7	2.27	2.12	82.4	94.0
Insurance	228.0	245.7	2.26	2.24	100.9	109.2
Securities	104.1	137.9	1.60	1.80*	69.8	76.4
Real Estate	1,083.0	1,058.1	8.86	6.74	150.4	156.9

Source: DRI/McGraw Hill.

Note: * represents employment increases

Service Sector

It is expected that during the next three years, the service sector will be more active than the manufacturing sector. In addition, two-fifths (40.0%) of service companies plan a move by the end of 1995, as opposed to about one quarter of manufacturing companies.³ This is no surprise to economic forecasters. In a study performed by Expansion Management which solicited responses from over 34,000 readers, there are indications that the retail industry (department stores, clothing stores, supermarkets, restaurants, and bars) will expand significantly. Of those polled, 29.0% stated that they plan to expand in the next year and 55.0% stated they planned to move within the next 3 years.

TRENDS IN SELECTED SERVICE INDUSTRIES (In billions of current dollars)

<u>Item</u>	<u>Unit of Measure</u>	<u>Value</u>	<u>90-01</u>	<u>91-92</u>	<u>92-93</u>	<u>93-94</u>
Accounting	Receipts	38.8	3.4	4.1	5.0	5.6
Advertising	Receipts	21.9	-3.8	0.5	1.0	3.8
Banks	Loans	2,420.0	-0.9	-0.3	2.0	4.0
Cable television	Revenues	28.8	11.1	9.1	9.6	9.5
Computer professional services	Revenues	66.7	12.2	12.1	9.7	9.6
Credit unions	Loans	157.6	5.9	5.1	4.4	7.0
Data processing	Revenues	53.6	14.1	14.3	14.0	15.5
Education & training	Expenditures	529.3	8.2	6.3	5.6	5.8
Electronic & info. services	Revenues	15.6	13.2	14.7	16.0	14.7
Equipment leasing	Orig equip. cost	128.7	-3.3	1.2	2.8	3.0
Health services	Revenues	1,060.5	11.4	11.6	12.1	12.5
Legal services	Receipts	97.0	1.3	1.5	3.3	4.3
Life & health insurance	Premium receipts	316.8	-0.1	6.9	6.0	6.0
Management consulting	Receipts	77.0	4.7	5.0	5.9	6.9
Motion picture theaters	Receipts	5.3	-4.4	1.5	4.5	3.1
Prerecorded music	Manufacturer's value	11.8	3.9	15.2	15.0	13.5
Property & casualty insurance	Net premiums written	245.0	2.4	2.0	3.5	4.0
Railroads (class 1)	Revenue	29.4	-2.5	2.2	1.4	2.4
Retail Sales, total	Sales	2,232.0	2.2	5.1	6.3	7.0
Apparel & accessories	Sales	112.0	3.2	8.2	2.9	3.7
Gen. merchandise stores	Sales	320.0	7.5	8.3	13.4	14.3
Eating/drinking places	Sales	216.0	5.9	2.5	2.5	4.4
Food retailing	Sales	399.0	1.3	1.9	0.8	3.1
Savings institutions	Mortgage loans	710.0	-9.5	-6.8	-6.8	-5.1
Space commerce	Revenues	6.5	29.1	11.2	9.0	22.6
Telecommunications services	Revenues	193.1	6.1	5.0	6.0	7.7
Travel services	Expenditures	420.4	3.4	5.2	4.8	5.8
Trucking & courier services	Revenues	331.0	2.6	6.5	5.7	5.8
Venture capital	Capital Commitments	2.7	-31.2	100.5	11.6	-6.8
Wholesale sales, total	Sales	1,973.0	-1.2	3.2	3.8	4.0

Source: U.S. Industrial Outlook, 1994, U.S. Department of Commerce, International Trade Administration.

Manufacturing Sector

According to Office of Trade and Economic Analysis at the U.S. Department of Commerce "high-technology industries dominate the list of fastest-growing industries, with semi-conductors at the top of the list - despite weaknesses in the Japanese markets"⁴ for 1993 and 1994. Top growth companies also include the production of health-related equipment, companies that produce computers and peripherals and those involved in the production of household appliances. In addition, the automotive sector in general is where modest growth is expected as well.

TEN FASTEST GROWING MANUFACTURING INDUSTRIES IN 1994

(% changes based on 1987 dollar shipments)

<u>SIC</u>	<u>Industry</u>	<u>1993-94</u>
3541	Machine Tools, metal cutting types	12.8
367	Electronic components and accessories	11.1
3842	Surgical appliances	10.0
2451	Mobile homes	9.4
371A	Automotive parts and accessories	7.7
3841	Surgical and medical instruments	7.0
364A	Lighting Fixtures	6.6
2515	Mattresses and bedsprings	6.4
3111	Leather tanning and finishing	6.0
3826	Analytical instruments	6.0

Source: U.S Industrial Outlook, 1994, U.S. Department of Commerce, International Trade Administration.

All of 10 of the fastest growing manufacturing industries are being propelled by the domestic demand for automobiles, housing, computerization, health care and environmental equipment.⁵ By contrast, 7 of the most sluggish industries are defense related. In the other 3 industries, changing business practices and foreign competition have eroded markets. U.S exports are still being restrained by the sagging economies of continental Europe and Japan. At the same time, foreign rivals from China to Germany are competing fiercely for business in the U.S. Continued tough competition will prevent any let up in corporate restructuring and downsizing and is expected to continue well into 1995.¹¹

TEN SLOWEST GROWING MANUFACTURING INDUSTRIES IN 1994

(% Change based on 1987 dollar shipments)

<u>SIC</u>	<u>Industry</u>	<u>1993-94</u>
3728	Aircraft parts and engines, nec	-24.3
3724	Aircraft engines and engine parts	-20.0
3721	Aircraft	-11.3
3812	Search and navigation equipment	- 6.6
3831	Ship building and repair	- 6.6
3764	Space propulsion units and parts	- 5.3
3172	Personal leather goods, nec	- 5.2
2761	Manifold business forms	- 5.0
2874	Phosphatic fertilizers	- 4.8
3769	Space vehicle equipment	- 3.9

Source: U.S Industrial Outlook, 1994, U.S. Department of Commerce, International Trade Administration.

STATE COMPETITION

The state of South Carolina is recognized both regionally as well as nationally as one of the premier states for aggressive and innovative economic development. The recent decision by BMW to locate in Greenville-Spartanburg, expansion plans by Rhone Poulenc in Florence and the selection of Charleston as one of three finalist for the much sought after Mercedes Benz project is testimony to their success. This is due in part to the leadership exhibited over the years at the statehouse and the Department of Commerce and to the cooperation of local communities. These activities have not gone unnoticed by surrounding states, particularly North Carolina and Georgia, acting as a wake-up call for many states. Recent legislation, either past or pending, by these states have either created similar incentives as South Carolina or enacted other legislation to become more competitive. The following text will address, these actions regarding three states: North Carolina, Georgia and Alabama.

Alabama

Alabama's recent success in luring the Mercedes Benz vehicle assembly plant to Vance, Alabama was due to several incentives, many of which were one time probably never to be seen again. Other incentives, however, were passed specifically to promote ongoing industrial recruitment with Mercedes Benz being the catalyst that spurred legislation. Probably the most significant recent incentive is the act allowing the State Industrial Development Authority to ability to finance new and expanding industries through Tax Increment Financing.³³ Under the Act the State Industrial Development Authority is allowed to finance the cost of land, buildings and equipment for companies engaged in manufacturing, warehousing and distribution, and certain types of research and computer related services. The Authority is allowed to issue bonds and to loan the proceed to qualifying companies to finance project costs. The bonds are payable solely from private payments the State's credit will not be obligated and can be structured one of two ways:

Option #1 - Industrial Revenue Bonds

Under this option, the Authority enters into a Financing Agreement with the company under which the company would agree to pay the principal and interest on the bonds. The company would receive a tax credit against its corporate income taxes for the amounts paid as principal and interest on the bonds. The company would also be permitted to collect a "Job Development Fee" of up to 5.0% of gross wages from new employees and use these funds to pay the principal and interest. The employee would receive a tax credit against his or her personal income taxes for the Job Development Fee withheld. Under this option, the entire cost of the project could be financed if the company's credit is adequate to support the bonds.

Option #2 - Tax Increment Bonds

Under this option, the company would agree to make annual payments to the Authority in an amount equal to the total of (1) the amount owed as corporate income tax, and (2) the Job Development Fees collected from the employees. These amounts would be paid into a special "tax increment fund" held by a trustee and the amounts on deposit in that fund would be used to pay the bonds. The company would receive a tax credit against its corporate income taxes for the amount paid into the bonds. The company would receive a tax credit against its corporate income tax for the amount paid into the fund related to taxes and the employees would receive the same credit as under Option #1 for the Job Development Fee withheld from their compensation. Under this option, the size of the bond issue would depend on the amounts to be paid into the tax increment fund, the reliability of those payments and the availability of any forms of credit support from parties other than the Authority and the State.

Certain criteria apply for Approved companies and Projects eligible for financing by the State Industrial Development Authority under Act No. 93-851 as follows:

Types of Projects:	Any land, building or other improvement and all real and personal properties deemed necessary or useful in connection therewith, located in the State, for use as an "industrial or research enterprise" as defined in the Act.
Minimum Capital Investment:	\$5,000,000
Minimum Number of Jobs:	100
Minimum Wage Requirement:	The average hourly wage for full-time hourly employees must be at least \$8/hr., or the average total compensation (including benefits) for full-time employees at the Project must be at least equivalent to \$10/hr.
Creditworthiness of Company:	Subject to review and approval by the Authority.
Economic Viability of the Project:	Subject to review and approval by the Authority.

It is not certain how long this act will remain in effect. In fact, when the law was passed on September 7, 1993 the criteria were called *interim criteria* with more definitive criteria to be defined and approved at a later date. The program, nevertheless, is currently being used actively to recruit prospective firms throughout the state.

Georgia

Georgia, like South Carolina, has one of the better state training programs in the country. Incentives offered by the state focuses on the provision of either cheap or free land, utility extensions and freeport laws that exempted inventory from taxation according to county laws. Recently, however, the state has enacted legislation that will significantly alter the way the state is viewed.

The first act is the use of proceeds from the sale of lottery tickets. Until now, the revenue went to the general education fund. Now, however, a significant portion of the funds are targeted to pay the full tuition to any state university in Georgia for high school graduates who maintain at least a B grade average. For those who do not graduate with a grade average of at least a B, there will be partial tuition assistance to a state supported university or a two year vocational school. This program, while not directly assisting prospective manufacturers, addresses the heart of current management concerns regarding the work force - education.

The second act is called the Georgia Business Expansion and Support Act of 1994³⁴ and consists of eight significant credits or exemptions:

1. JOB TAX CREDIT

Provides for a new statewide job tax credit for certain business enterprises. Applies to business or headquarters of a business engaged in manufacturing, warehousing and distribution, processing, tourism, and research and development. Does not include retail businesses. Provides for three tiers of credits:

Counties in the state of Georgia are ranked according to the following factors:

1. highest unemployment for the most recent 36 month period;
 2. lowest per capita income for the most recent 36 month period;
 3. highest percentage of residents whose incomes are below the poverty level according to the most recent data available; and
 4. average weekly manufacturing wage according to the most recent data available.
- Counties ranked 1st through 53rd are Tier 1 and represent the state's least developed counties. Companies creating 10 or more new jobs in a Tier 1 county will receive a \$2,500 tax credit.

- Counties ranked 54th through 106th are Tier 2. Companies creating 50 or more new jobs in a Tier 2 county will receive a \$1,500 tax credit.
- Counties ranked 107th through 159th are Tier 3. Companies creating 50 or more new jobs in a Tier 3 county will receive a \$500 tax credit.

Credits are allowed for each full-time employee job for five years beginning with years two through six after the creation on the job. The credit cannot be more than 50% of the taxpayers total state income tax liability for that taxable year. A credit claimed but not used in any taxable year may be carried forward for a period of 10 years from the close of the taxable year in which the qualified jobs were established.

The legislation also allows for a Tier 1 credit for less developed urban census tracts. In addition to the ten contiguous census tracts criteria already in place, a new section allows for the inclusion of one or more census tracts which have been adversely impacted by the loss of a business, jobs or residences related to an airport expansion or closing of a related business enterprise (i.e. Eastern Airlines). The law reduces to 30% the number of local residents required to access the credit.

2. INVESTMENT TAX CREDIT

Based on the same tiers as the Job Tax Program. Allows a corporation or person which has operated an existing manufacturing facility in the state for the previous three years to obtain a credit against income tax liability.

- Companies expanding in Tier 1 counties must invest \$1 million to receive a 5% credit. The credit increases to 8% for recycling, pollution control and defense conversion activities.
- Companies expanding in Tier 2 counties must invest \$3 million to receive a 3% credit. The credit increases to 5% for recycling, pollution control and defense conversion activities.
- Companies expanding in Tier 3 counties must invest \$5 million to receive a 1% credit. The credit increases to 3% for recycling, pollution control and defense conversion activities.

The credit is a percentage of the total value of all qualified investment property and cannot be more than 50% of the taxpayer's total state income tax liability for that taxable year. An existing firm cannot take both the jobs tax credit and the

investment tax credit.

3. RETRAINING TAX CREDIT

Employees who provide retraining for employees are eligible for a tax credit equal to 25% of the costs of retraining per full-time student up to \$500. The training must:

- a. enhance the functional skills of online and hourly employees otherwise unable to function effectively on new equipment;
- b. be approved by the Department of Technical and Adult Education; and
- c. be provided at no cost, direct or indirect, to the employee.

The credit cannot exceed more than 50% of the taxpayer's total state income tax liability for that taxable year.

4. CHILD CARE CREDIT

Employers who provide or sponsor child care for employees are eligible for a tax credit of up to 50% of the direct cost of operation to the employer. The credit cannot exceed more than 50% of the taxpayer's total taxpayer's total state income tax liability for that taxable year.

5. MANUFACTURING SALES TAX EXEMPTION

Provides for an exemption from sales and use tax for manufacturing equipment:

- a. machinery used directly in the manufacture of tangible personal property when the machinery is bought to replace or upgrade machinery in the manufacturing plant presently existing in the state.
- b. machinery used directly in the manufacture of tangible personal property when the machinery is incorporated as additional machinery for the first time into a manufacturing plant presently existing in the state.

6. PRIMARY MATERIAL HANDLING SALES TAX EXEMPTION

Provides for the exemption from sales tax and use tax on purchases of primary raw material handling equipment which is used directly for the handling and movement of tangible personal property in a new or expanding warehouse or distribution facility when such new facility or expansion is worth \$10 million or more.

7. JOB TAX CREDIT FOR JOINT DEVELOPMENT AUTHORITIES

Provides for an additional \$500 job tax credit for a business locating within the jurisdiction of a joint authority of two or more contiguous counties. It also allows for the business to qualify for the greatest amount of job tax credits of any of the participating counties.

8. ELECTRICITY EXEMPTION

Electricity purchased for the direct use in manufacturing a product is exempt from sales tax when the total cost of the electricity makes up more than 50% or more of all materials used in making the product. This exemption will be phased in over five years beginning in 1995. It allows 20-40-60-80-100 percent exemptions on the sales tax and is available for new and existing firms.

Many of these new incentives have been patterned after those of South Carolina, however, a good part of the program focuses on existing industry. In time it is expected that these exemptions and credits will extend to all industry whether new or existing.

It is interesting to note that the state of Georgia has recently passed a constitutional amendment which authorizes the creation of multi-county industrial parks, convention centers, etc. This amendment, also much like South Carolina's allows public or privately initiated projects to be contracted among contiguous counties and municipalities. Tax credits from any of the partners may be utilized.

North Carolina

North Carolina has traditionally relied on its employee training program, excellent road systems with the expectations that local governments will provide the bulk of the incentives. The state, however, does not allow local governments to abate or exempt ad valorem taxes so that local incentives are usually in the form the provision of free or low cost infrastructure to a prospect's site.

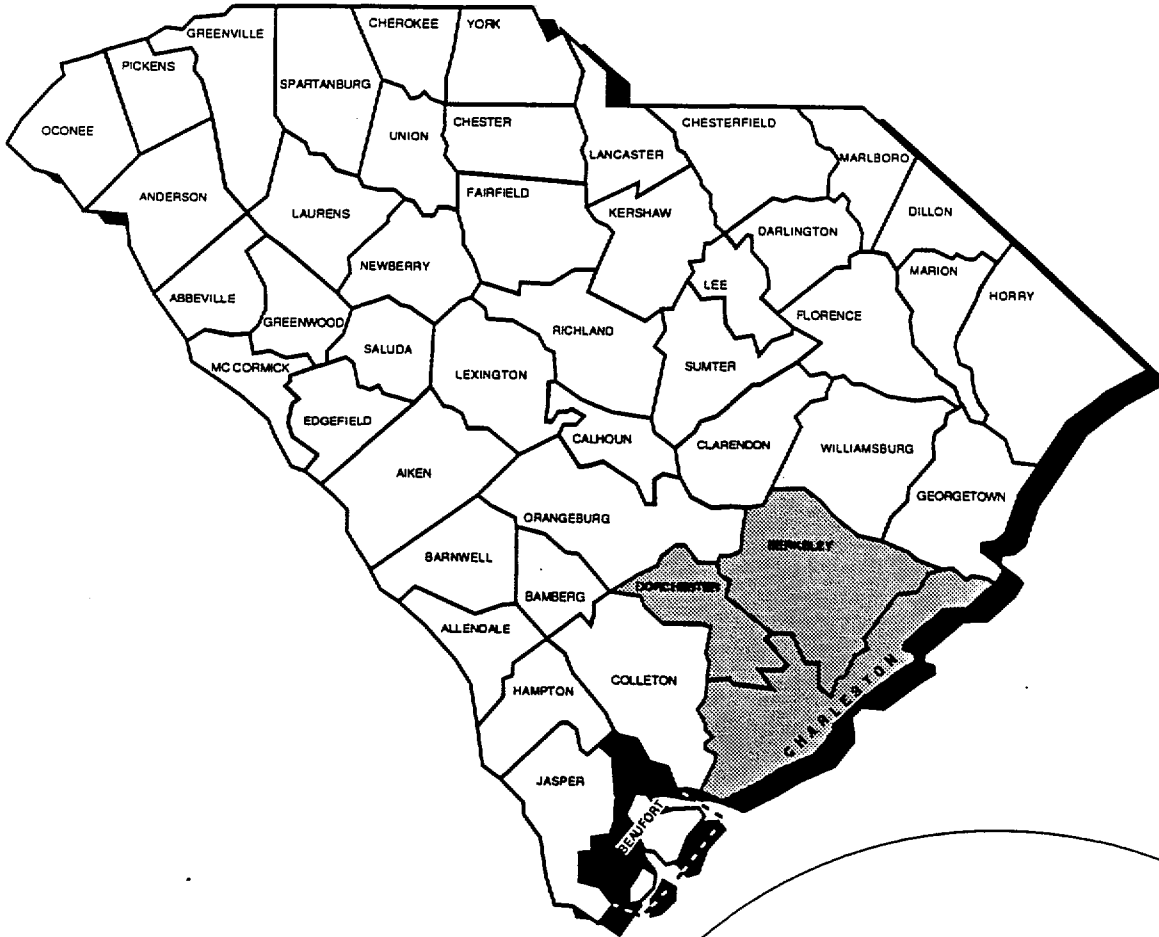
There appears to be the rumblings of initiatives within the state to enact legislation allowing the state to become more competitive. For instance, the state in 1992 allowed a \$2,800 Job Creation Tax Credit per manufacturing job created in economically distressed counties. The credit is taken ratably over 4 years but cannot offset more than 50% of a firm's annual North Carolina Tax liability after other credits, if any.

The legislature is considering a bill presented by the Governor's office known as the North Carolina State Competitiveness Fund. This incentive requires a funding allocation every year and a cash grant is used to entice prospective firms to locate in North Carolina. The grant is usually no greater than \$250,000.

A groundswell of support is beginning in the statehouse to enhance the state's attractiveness to competitors due to the recent success of its neighbor to the south, South Carolina. The success of the Research Triangle Park and the Raleigh-Durham area will probably continue regardless of the incentives created. The same cannot be said about the rest of the state. It is expected that North Carolina will start adopting many of the same programs that other southern states have recently enacted.

CHARLESTON HARBOR STUDY AREA

Tri County Region



Overview

The greater Charleston area is better known as the Trident Region and is comprised of three counties - Berkeley, Charleston and Dorchester. The economy is approximately 2,600 square miles and is influenced heavily by the military, tourism, the Port of Charleston and a few large industrial employers in the region.

Location

The Charleston Trident area is located along the central South Carolina coast and includes over 90 miles of the Atlantic coastline and reaches some 50 miles inward towards the intersection of Highways 26 and 95. The area includes twenty-five incorporated communities ranging in size from Jamestown in Berkeley County with a population of approximately 84 to the City of Charleston with about 80,000 residents.

Government

Management of local government varies between city and county governments in the Trident area. In Berkeley County, county affairs are managed by a county council with an elected county supervisor serving as the chief administrative officer.

Charleston County has a council-administrator form of government. Council members are elected at large to four year terms. A county administrator is appointed by the county council to manage the day to day activities of the county.

Dorchester County has a seven member county council, with each member elected to four-year terms. The council administrator is appointed by the county council to administer the day to day activities of the county.

The twenty five incorporated areas with the tree county region operate under separate mayor/council form of government although the day to day operations vary from city to city.

Transportation

Air Traffic

Charleston International Airport, located near the intersection of Interstates 26 and 526 in North Charleston, is an international facility providing commercial and military air service for the region. The airport currently services over 1.5 million passengers annually with four major airlines serving offering over 70 flights per day. Major airlines include American, Delta, US Air and United. There are six private airports located throughout the region that can accommodate both corporate and private aircraft.

Motor Freight	Approximately 100 motor carriers serve the Trident region.
Railroads	Norfolk Southern, the CSX System and the South Carolina Rail Road Commission serve the region.
Highways/Interstate	Interstate highways serving the region include I-26 (east/west), I-95 (north/south) and I-526 (east/west). The area is also served by four major U.S. highways and seven major state highways. Interstate 526 (the Mark Clark Expressway) has just been recently completed and is a 19 mile semi-circle beltway area the community. This expressway stretches from US Highway 17 South in the west, to US Highway 17 North in Mt. Pleasant.

Climate	Average Daily Temperature:
	High 75.3°
	Low 54.2°
	Avg Precipitation 51.59 inches
	Avg Relative Humidity... 75.0%

Colleges/Universities

Charleston Southern - The only church affiliated college in the region. Ranked 2nd as the largest private university in the state of South Carolina. The curriculum consists of 28 undergraduate degrees as well as a master's degree in Business Administration, Education and Art in Teaching. Enrollment - 2,614.

College of Charleston - Oldest institution of higher learning in the state of South Carolina and the 13th oldest in the nation. The college is a four-year, state assisted, liberal arts institution offering 34 undergraduate degrees. In conjunction with the University of Charleston, 10 graduate degrees are offered as well in education, history, marine biology, mathematics, public administration and professional development facilities and services. Enrollment - 9,660.

Citadel - Largest non-federal military institution in the United States. The Citadel Evening College offers co-educational opportunities in limited undergraduate degrees. An MBA program and 15 graduate degrees, including civil engineering, are the major graduate degrees offered. Enrollment - 3,679.

Johnson & Wade University in Charleston - A private, non-profit co-educational institution offering a Bachelors and Associate degrees in culinary arts, baking and pastry arts, and hospitality management. Headquarters are located in Rhode Island. Enrollment - 1,000.

Medical University of Charleston - The oldest medical institution in the South and forms the

core of one of the State's largest medical complex. MUSC has six colleges - medicine, nursing, health related professions, pharmacy, dental medicine, and graduate studies. Enrollment - 2,705.

Trident Technical College - A public two year institution. The college emphasizes practical, marketable job skills by providing a wide variety of technical programs. Enrollment - 8,012.

OCCUPATIONAL EMPLOYMENT

Berkeley, Charleston & Dorchester Counties

<u><i>Occupational Title</i></u>	<u><i>1986 Estimated Employed</i></u>	<u><i>% Percent Employed</i></u>	<u><i>2000 Estimated Employed</i></u>	<u><i>% Percent Employed</i></u>	<u><i>Projected % Annual Growth Rate</i></u>
<i>Administrative Support & Clerical</i>	28,306	15.4%	38,215	14.4%	2.3%
<i>Agricultural, Forestry & Fishing</i>	1,817	1.0%	2,569	1.0%	2.8%
<i>Executive, Managerial & Administrative</i>	13,917	7.5%	21,292	8.0%	3.5%
<i>Maintenance & Production</i>	55,066	29.9%	73,880	27.8%	2.3%
<i>Marketing Sales</i>	21,135	11.5%	31,789	12.0%	3.4%
<i>Professional, Paraprofessional & Technical</i>	34,087	18.5%	48,774	18.4%	2.9%
<i>Service</i>	30,055	16.3%	49,172	18.5%	4.2%
<i>Total, All Occupations</i>	184,383	100.0%	265,691	100.0%	2.9%

Source: SC Employment Commission and Center for Business
Research - Trident COC

Population Projections

Berkeley, Charleston & Dorchester Counties

<i>MSA</i>	<i>1980</i>	<i>1990</i>	<i>2000</i>	<i>2010</i>
<i>Berkeley</i>	<i>94,727</i>	<i>129,900</i>	<i>183,600</i>	<i>259,700</i>
<i>Charleston</i>	<i>276,556</i>	<i>295,800</i>	<i>314,200</i>	<i>332,700</i>
<i>Dorchester</i>	<i><u>58,761</u></i>	<i><u>83,800</u></i>	<i><u>214,700</u></i>	<i><u>188,600</u></i>
<i>Total</i>	<i>430,044</i>	<i>509,500</i>	<i>712,500</i>	<i>781,000</i>

Source: *U.S. Census Bureau, S.C Department of Research and Statistical Services.*

EDUCATION INFORMATION

Berkeley, Charleston & Dorchester Counties

	Berkeley County	Charleston County	Dorchester II	Dorchester IV	State
Student Population	28,189	45,413	14,413	2,750	640,222
Number of Public Schools	35	72	14	7	1071
Elementary	17	44	9	4	621
Middle	8	15	3	0	208
High	0	13	2	3	242
Per Pupil Revenues	\$3,598	\$4,049	\$3,526	\$4,356	\$4,131
Per Pupil Expenditures	\$3,484	\$3,956	\$3,442	\$4,191	\$4,052
Expenditure per Pupil Breakdown					
Instruction	67.6%	71.2%	72.8%	71.5%	71.0%
Plant Operations	10.1%	9.5%	9.0%	7.1%	9.7%
School Administration	6.6%	7.1%	5.9%	7.4%	6.6%
District Administration	6.9%	5.4%	4.7%	5.1%	4.6%
Pupil Food	7.1%	5.2%	5.4%	6.8%	6.2%
Pupil Transportation	1.7%	1.6%	2.3%	2.1%	1.8%
Pupil/Teacher Ratio	19:1	19:1	20:1	18:1	18:1
Teacher's Average Salaries					
0-10 years experience	\$24,183	\$22,534	\$24,431	\$24,030	\$23,629
11-17 years experience	\$30,651	\$28,557	\$30,889	\$29,898	\$29,629
18+ years experience	\$32,871	\$31,295	\$33,734	\$32,359	\$31,418
All teachers/District Avg.	\$27,989	\$26,647	\$28,661	\$27,795	\$28,068
SAT Scores					
Math	453	422	460	376	437
Verbal	408	396	410	341	394
Total	861	818	870	717	831
After Graduating, % Entering					
Junior & Senior Colleges	49.9%	55.7%	55.7%	43.6%	53.0%
Other Postsecondary Schools	5.3%	3.5%	1.2%	5.7%	5.0%
Workforce/Other	44.8%	40.8%	43.1%	50.7%	41.9%
Drop-out Rate Grades 9-12	3.0%	2.9%	2.0%	1.9%	3.2%

Source: South Carolina Department of Education, 2/93.

LABOR FORCE

Berkeley, Charleston and Dorchester Counties

	<u>Berkeley</u>	<u>Charleston</u>	<u>Dorchester</u>	<u>MSA</u>
Population	128,776	295,039	83,060	506,875
% Population by Age Group				
18-24	10.9%	14.4%	10.8%	12.9%
25-35	20.0%	19.2%	19.4%	19.5%
35-49	20.8%	19.7%	22.2%	20.4%
50+	15.7%	21.6%	17.8%	19.4%
Median Age	28.2%	30.4%	29.8%	29.8%
Civilian Labor Force	53,890	145,400	37,890	237,260
Total Employment	52,210	140,370	36,630	229,200
Total # Employed	1,760	5,030	1,260	8,060
% Employed	3.3%	3.5%	3.3%	3.4%
Labor Force by Race/Sex (%)				
White	75.8%	67.6%	75.8%	70.4%
Non-White	24.1%	32.4%	24.1%	29.6%
Male	58.0%	54.5%	58.1%	55.8%
Female	41.9%	45.4%	41.8%	44.2%
# High School Graduates				
Entering Labor Force	755	830	325	1,910
College/University Degrees Conferred	—	—	—	1,960
Technical College Enrollment	—	—	—	6,400
Estimated % Under-Employed*	2.9%	30.9%	28.2%	29.4%

Note: * underemployed is an estimate of employed earning less than \$10,000 annually

Source: Center for Business Research, Charleston Trident Chamber of Commerce

PROJECTED GROWTH RATES

Charleston Harbor Study Area - Berkeley, Charleston & Dorchester Counties

DATE	TOTAL EMPLOYMENT (thousands)		MFG. EMPLOYMENT (thousands)		PERSONAL INCOME (millions)		TOTAL POPULATION (thousands)		RETAIL SALES (millions)	
<i>Historic:</i>										
1986	179.3	-	19.5	-	5,514.2	-	483.8	-	-	-
1987	185.8	3.6%	19.8	1.5%	5,937.0	7.7%	486.6	0.6%	6,075.7	-
1988	193.0	3.9%	20.5	3.5%	6,436.6	8.4%	491.6	1.0%	6,691.0	10.1%
1989	197.0	2.1%	20.8	1.5%	6,485.3	0.8%	530.6	7.9%	7,059.4	5.5%
1990	195.6	-0.7%	21.1	1.4%	7,589.3	17.0%	509.3	-4.0%	8,079.1	14.4%
1991	214.6	9.7%	21.0	-0.5%	7,666.9	1.0%	516.3	1.4%	8,001.0	-1.0%
<hr/>										
<i>Projected:</i>										
1992	205.1	-4.4%	20.3	-3.3%	8,095.7	5.6%	524.0	1.5%	8,392.5	4.9%
1993	211.3	3.0%	20.4	0.5%	8,624.0	6.5%	531.8	1.5%	8,492.0	1.2%
1994	216.6	2.5%	20.5	0.5%	9,181.1	6.5%	539.5	1.4%	8,676.0	2.2%
1995	221.3	2.2%	20.7	1.0%	9,746.6	6.2%	547.1	1.4%	8,873.7	2.3%
1996	226.7	2.4%	20.8	0.5%	9,965.8	2.2%	554.9	1.4%	9,260.8	4.4%

Source: South Carolina Economic Forecasting Service, "The South Carolina Economic Outlook: Five-Year Projections for Counties", 1992-96"
Reference Appendix ? Consolidated Data for three county projections of Berkeley, Charleston and Dorchester.

CHARLESTON TRIDENT SOUTH CAROLINA

HOURLY WAGE RATES BY OCCUPATION CHARLESTON TRIDENT AREA, SC

Charleston MSA

	Hourly Wage (\$)		
	Min.	Ave.	Max.
Managerial and Administrative Occupations			
<i>Administrative Services Manager</i>	6.50	11.88	25.44
<i>Communications, Transportation and Utilities Managers</i>	12.50	20.55	28.14
<i>Construction Managers</i>	7.50	17.16	26.20
<i>Education Administrators</i>	12.00	23.72	29.45
<i>Engineering, Mathematical and Science Managers</i>	16.00	29.50	37.02
<i>Financial Managers</i>	12.00	20.56	37.50
<i>Food Service and Lodging Managers</i>	5.80	10.39	17.64
<i>General Managers and Top Executives</i>	10.00	27.27	63.00
<i>Industrial Production Managers</i>	12.15	18.70	33.03
<i>Marketing, Advertising and Public Relations Managers</i>	10.00	21.16	40.89
<i>Medicine and Health Services Managers</i>	14.40	21.43	21.80
<i>Personnel, Training and Labor Relations Managers</i>	6.15	16.78	31.50
<i>Property and Real Estate Managers</i>	16.47	18.03	21.15
<i>Purchasing Managers</i>	7.50	13.52	19.50
Professional, Paraprofessional and Technical Occupations			
<i>Accountants, Auditors and Other Financial Specialist</i>	8.00	13.16	22.00
<i>Announcers</i>	4.63	7.86	8.40
<i>Artists and Related Workers</i>	11.09	11.46	12.37
<i>Chemical Engineers</i>	21.67	25.46	28.85
<i>Chemical Technicians and Technologists</i>	11.92	13.63	17.33
<i>Chemists, except Biochemists</i>	16.82	22.72	32.21
<i>Civil Engineers, including Traffic</i>	14.17	16.86	21.00
<i>Computer Programmer Aides</i>	5.00	11.37	19.39
<i>Computer Programmers</i>	9.75	14.87	22.02
<i>Cost Estimators</i>	12.50	16.79	20.55
<i>Designers, except Interior Designers</i>	9.27	10.30	12.37
<i>Dietitians and Nutritionists</i>	5.50	8.54	10.06
<i>Drafters</i>	8.89	10.78	11.12
<i>Electrical and Electronic Engineers</i>	17.33	20.70	23.60
<i>Electrical and Electronic Technicians</i>	9.42	13.84	15.98
<i>Employment Interviewers Employment Service</i>	9.00	10.88	11.50
<i>Human Services Workers</i>	4.60	4.70	7.38
<i>Industrial Engineers, except Safety</i>	12.50	17.19	19.89
<i>Instructors and Coaches, Sports and Physical Training</i>	5.00	9.03	14.00
<i>Instructors, Nonvocational Education</i>	10.25	10.96	16.64
<i>Interior Designers</i>	10.00	23.33	30.00
<i>Lawyers</i>	15.25	38.21	100.00

Charleston MSA

	Hourly Wage (\$)		
	Min.	Ave.	Max.
<i>Licensed Practical Nurses</i>	9.90	10.31	12.45
<i>Mechanical Engineers</i>	19.00	20.10	20.19
<i>Medical Records Technicians</i>	6.00	6.88	7.00
<i>Medical and Clinical Laboratory</i>	12.21	12.21	12.21
<i>Paralegal Personnel</i>	9.80	11.59	13.50
<i>Personnel, Training and Labor Relations Specialists</i>	14.42	16.30	18.15
<i>Pharmacists</i>	18.64	18.94	22.00
<i>Photographers</i>	7.38	11.99	14.62
<i>Physical Therapists</i>	16.64	17.73	22.00
<i>Physicians and Surgeons</i>	32.93	63.52	100.00
<i>Professional Librarians</i>	8.50	11.92	17.88
<i>Public Relations Specialists and Publicity Writers</i>	6.34	7.56	10.00
<i>Purchasing Agents and Buyers</i>	7.46	13.13	20.89
<i>Recreation Workers</i>	5.50	6.20	10.50
<i>Recreational Therapists</i>	6.25	10.35	11.09
<i>Registered Nurses</i>	16.20	16.20	16.20
<i>Social Workers, except Medical and Psychiatric</i>	8.25	12.39	13.60
<i>Surveyors and Mapping Scientists</i>	10.00	10.37	10.92
<i>Systems Analysts, Electronic Data Processing</i>	15.00	20.44	23.07
<i>Teachers, Elementary School</i>	8.00	12.42	19.70
<i>Teachers, Preschool and Kindergarten</i>	8.52	9.75	14.00
<i>Writers and Editors</i>	13.68	28.41	35.35
Sales and Related Occupations			
<i>Cashiers</i>	4.25	4.82	6.38
<i>Counter and Rental Clerks</i>	4.25	5.07	6.00
<i>Door-to-Door Vendors and Solicitors</i>	4.25	4.40	5.00
<i>First Line Sales Supervisors</i>	6.25	10.35	22.00
<i>Sales Agents and Placers, Insurance</i>	9.62	10.68	13.60
<i>Sales Agents, Advertising</i>	12.00	17.69	20.65
<i>Sales Agents, Selected Business Services</i>	7.50	10.81	15.00
<i>Sales Representatives, except Scientific Products</i>	6.00	13.60	16.00
<i>Sales Representatives, Scientific Products</i>	12.00	14.00	16.00
<i>Salespersons, Parts</i>	5.97	7.68	10.46
<i>Salespersons, Retail</i>	4.56	7.80	20.00
<i>Stock Clerks, Sales Floor</i>	4.40	5.33	9.00
Clerical and Administrative Support Occupations			
<i>Adjustment Clerks</i>	5.93	6.82	8.91
<i>Bill and Account Collectors</i>	7.50	8.33	8.41
<i>Billing, Cost and Rate Clerks</i>	5.22	8.25	10.95
<i>Billing, Posting, Calculating Machine Operators</i>	8.92	8.98	9.00

Charleston MSA

	Min.	Hourly Wage (\$) Ave.	Max.
<i>Bookkeeping, Accounting and Auditing Clerks</i>	6.00	8.90	12.38
<i>Computer Operators, except Peripheral Equipment</i>	7.03	9.79	12.14
<i>Customer Service Representatives, Utilities</i>	9.17	9.27	9.77
<i>Data Entry Keyers, except Composing</i>	6.23	7.23	8.85
<i>Dispatchers, except Police, Fire and Ambulance</i>	8.07	10.78	15.00
<i>File Clerks</i>	5.25	5.92	7.00
<i>General Office Clerks</i>	6.02	7.93	10.47
<i>Hotel Desk Clerks</i>	5.00	5.72	6.00
<i>Insurance Claims Clerks</i>	5.32	7.26	9.20
<i>Insurance Policy Processing Clerks</i>	7.87	7.87	7.87
<i>Loan Interviewers</i>	7.51	8.22	10.40
<i>Loan and Credit Clerks</i>	6.20	7.98	10.63
<i>Mail Clerks, except Mail Machine Operators</i>	6.09	6.61	7.11
<i>Mail Machine Operators, Preparation and Handling</i>	4.60	6.73	6.94
<i>Messengers</i>	4.27	4.91	5.95
<i>Meter Readers, Utilities</i>	9.95	11.79	12.48
<i>New Accounts Clerks</i>	7.51	9.61	10.97
<i>Order Clerks-Materials, Merchandise and Service</i>	5.60	8.72	13.55
<i>Order Fillers, Wholesales and Retail Sales</i>	4.75	5.94	7.00
<i>Payroll and Timekeeping Clerks</i>	6.40	9.45	12.80
<i>Personnel Clerks, except Payroll and Timekeeping</i>	7.03	9.19	12.02
<i>Production, Planning and Expediting Clerks</i>	5.00	10.33	14.50
<i>Real Estate Clerks</i>	7.74	9.19	9.92
<i>Receptionists and Information Clerks</i>	5.50	6.48	9.00
<i>Secretaries</i>	6.75	8.41	12.12
<i>Shipping, Receiving and Traffic Clerks</i>	5.71	8.91	10.33
<i>Stock Clerks Stockroom, Warehouse or Storage</i>	4.50	6.61	9.62
<i>Supervisors, Administrative Support Occupation</i>	5.85	10.67	17.45
<i>Switchboard Operators</i>	4.63	6.12	7.88
<i>Teachers' Aides and Education Assistants</i>	4.81	6.08	6.85
<i>Tellers</i>	5.98	6.89	7.82
<i>Typists</i>	4.42	7.61	9.04
<i>Typists, Word Processing Equipment</i>	6.25	7.90	12.00
<i>Service Occupations</i>			
<i>Baggage Porters and Bellhops</i>	4.25	4.26	4.35
<i>Bakers, Bread and Pastry</i>	4.75	6.67	10.00
<i>Bartenders</i>	2.13	4.27	6.00
<i>Butchers and Meat Cutters</i>	6.50	9.02	12.50
<i>Child Care Workers</i>	5.00	5.15	6.00
<i>Combined Food Preparation and Service</i>	4.49	4.54	5.24

Charleston MSA

	Hourly Wage (\$)		
	Min.	Ave.	Max.
<i>Cooks, Institution or Cafeteria</i>	5.00	6.66	7.10
<i>Cooks, Restaurant</i>	6.00	6.89	8.00
<i>Cooks, Short Order</i>	4.29	5.16	7.22
<i>Cooks, Specialty Fast Food</i>	4.50	4.61	4.70
<i>Counter Attendants-Lunchroom, Coffee Shop or Cafeteria</i>	4.50	4.97	5.15
<i>Dining and Cafeteria Attendants and Bartender Helpers</i>	3.00	3.09	4.75
<i>Food Preparation Workers</i>	4.46	5.15	6.83
<i>Guards and Watch Guards</i>	4.25	5.73	10.00
<i>Hosts and Hostesses</i>	2.13	4.46	5.50
<i>Housekeepers</i>	4.25	6.96	9.90
<i>Janitors and Cleaner, except Maids and Housekeepers</i>	4.25	5.53	11.55
<i>Maids and Housekeeping Cleaners</i>	4.35	5.38	16.67
<i>Medical Assistants</i>	5.05	7.08	10.25
<i>Nursing Aides, Orderlies and Attendants</i>	4.80	5.56	6.73
<i>Pharmacy Assistants</i>	4.75	5.97	7.00
<i>Physical and Corrective Therapy Assistants</i>	5.50	10.59	14.42
<i>Waiters and Waitresses</i>	2.09	2.50	4.75
 <i>Agricultural, Forestry, Fishing and Related Occupations</i>			
<i>Gardeners and Groundskeepers, except Farm</i>	5.26	6.30	7.75
<i>Log Handling Equipment Operators</i>	6.00	8.74	9.42
 <i>Production, Construction, Operating, Maintenance and Material Handling Occupations</i>			
<i>Aircraft Mechanics</i>	10.25	16.70	23.14
<i>Assemblers and Fabricators</i>	5.50	8.57	10.11
<i>Automotive Body and Related Repairers</i>	7.75	9.46	10.00
<i>Automotive Mechanics</i>	8.00	12.55	16.35
<i>Boiler Operator/Tenders, Low pressure</i>	10.22	14.59	16.17
<i>Bus Drivers</i>	5.21	11.27	12.00
<i>Bus and Truck Mechanics and Diesel Engine Specialists</i>	9.05	10.64	16.61
<i>Cabinetmakers and Bench Carpenters</i>	9.38	9.69	10.00
<i>Captains, Water Vessel</i>	10.50	12.38	15.20
<i>Carpenters</i>	8.71	9.86	11.50
<i>Cementing and Gluing Machine Operators/Tenders</i>	6.00	9.65	9.99
<i>Chemical Equipment Controllers/Operators</i>	12.40	12.77	14.43
<i>Chemical Equipment Tenders</i>	6.10	10.75	11.57
<i>Chemical Plant and System Operators</i>	12.50	13.30	13.58
<i>Coating/Painting/Spraying Machine Operators</i>	6.00	7.97	10.00
<i>Concrete and Terrazzo Finishers</i>	8.00	9.91	11.00
<i>Conveyor Operators and Tenders</i>	5.38	8.43	13.20
<i>Crane and Tower Operators</i>	10.18	11.85	13.86

Charleston MSA

	Min.	Hourly Wage (\$) Ave.	Max.
Crushing/Grinding/Mixing Machine Operators	10.25	10.25	10.25
Cutters and Trimmers, Hand	4.70	4.85	5.00
Cutting and Slicing Machine Operators/Tenders	7.44	8.22	8.64
Dragline Operators	8.00	11.67	13.50
Driver and Sales Workers	9.80	9.92	10.10
Electric Motor, Transformer and Related Repairers	7.15	7.67	10.00
Electrical Powerline Installers and Repairers	15.28	16.08	16.50
Electrical and Electronic Assemblers	7.07	7.24	8.42
Electricians	8.68	15.69	17.08
Extruding Machine Setters/Operators (Metal/Plastic)	7.12	7.90	8.38
Extruding/Forming/Pressing Operators/Tenders	5.10	5.48	8.64
First-Line Supervisors, Construction/Extractive	6.35	13.73	20.11
First-Line Supervisors, Helpers and Laborers	4.35	10.50	14.90
First-Line Supervisors, Mechanics	8.65	17.31	29.24
First-Line Supervisors, Production	7.05	17.31	26.00
First-Line Supervisors, Transportation	12.06	15.15	22.00
Freight, Stock and Material Movers, Hand	5.00	6.50	14.71
Furnace Operators and Tenders	9.80	11.89	13.99
Furnace, Kiln, Oven, Drier or Kettle Operators	5.00	12.31	16.88
Furniture Finishers	8.00	8.67	10.00
Grader, Dozer and Scraper Operators	7.50	11.85	16.09
Grinding and Polishing Workers Hand	4.98	5.39	5.60
Hand Packers and Packagers	4.25	4.90	8.21
Head Sawyers	9.00	9.52	9.78
Heat Treating, Tempering Machine Operators	10.63	11.78	14.51
Heating, A.C. and Refrigeration Mechanics	8.50	10.70	11.43
Helpers, Carpenters	6.50	7.35	7.75
Helpers, Electricians	6.03	8.54	11.00
Helpers, Mechanics and Repairers	5.00	6.56	8.25
Industrial Truck and Tractor Operators	7.25	9.02	11.57
Insulation Workers	9.00	9.78	10.00
Laundry and Drycleaning Machine Operators	4.50	5.34	6.53
Machine Assemblers	7.99	9.26	9.52
Machine Feeders and Offbearers	5.72	7.23	9.00
machine Tool Cutting Operators (Metal/Plastic)	9.79	10.55	10.60
Machinery Maintenance Mechanics	7.95	13.79	16.51
Machinery Maintenance Mechanics, Sewing	8.00	8.09	8.77
Machinery Maintenance Mechanics, Textile	8.00	9.97	11.20
Machinists	9.71	11.21	14.78
Maintenance Repairers, General Utility	6.75	12.98	17.33
Metal Fabricators, Structural Metal Products	6.00	9.66	10.88
Millwrights	11.33	16.91	17.08

Charleston MSA

	Hourly Wage (\$)		
	Min.	Ave.	Max.
Mobile Heavy Equipment Mechanics, except Engines	9.97	10.14	11.00
Numerical Control Machine Tool Operators (Metal/Plastic)	8.00	10.03	10.60
Operating Engineers	8.00	11.82	14.50
Package and Filling Machine Operators/Tenders	4.80	6.42	8.90
Painters and Paperhangers, Construction	8.75	10.18	10.75
Painters, Transportation Equipment	8.50	8.96	11.00
Paper Goods Machine Setters/Operators	6.20	9.44	11.75
Paving, Surfacing and Tamping Equipment	6.71	7.00	7.50
Plumbers, Pipefitters and Steamfitters	9.80	12.66	13.55
Precision Inspectors, Testers and Graders	8.53	11.51	16.17
Precision Instruments Repairers	16.07	16.60	17.33
Precision Lithography and Photoengraving	7.05	9.22	10.67
Press, Brake Machine Setters/Operators (Metal/Plastic)	6.29	6.68	9.20
Printing Press Machine Operators/Tenders	10.00	11.45	11.77
Production Inspectors, Testers, Graders, Sorters	5.00	8.54	12.54
Sawing Machine Operators/Tenders	5.91	8.16	9.92
Sewing Machine Operators, Garment	6.27	6.27	6.27
Sheet Metal Duct Installers	8.63	9.97	10.42
Sheet metal Workers	9.45	10.92	11.11
Shipfitters	10.97	10.98	11.00
Structural Metal Workers	11.00	12.50	13.50
Textile Machine Operators/Tenders	6.50	6.69	7.64
Textile Machine Setter/Operators	13.45	13.45	13.45
Tire Repairers and Changers	5.25	6.48	7.10
Tool Grinders, Filers and Sharpeners	8.65	10.56	14.78
Tool and Die Makers	7.50	14.94	15.95
Truck Drivers, Heavy or Tractor Trailer	6.10	10.19	16.26
Truck Drivers, Light-Including Delivery	5.06	9.70	13.28
Vehicle and Equipment Cleaners	5.00	5.47	6.40
Water and Liquid Waste Treatment Plant Operators	14.04	15.49	17.33
Welders and Cutters	9.50	10.70	11.37
Welding Machine Setters/Operators	10.29	11.19	12.60
Wood Machinists	7.25	8.94	9.50
Woodworking Machine Operator/Tenders	6.00	8.53	9.80
Woodworking Machine Setters/Operators	6.50	8.85	10.03

Source: SC Employment Security Commission. The SC Wage Survey, 1992.

Berkeley and Dorchester Counties

	Hourly Wage (\$)		
	Min.	Ave.	Max.
Managerial and Administrative Occupations			
Administrative Services Managers	4.55	14.61	34.20
Communications, Transportation and Utilities Managers	11.54	24.45	28.14
Construction Managers	10.50	15.17	22.50
Engineering, Mathematical and Science Managers	16.00	26.40	43.26
Financial Managers	8.25	21.98	37.50
Food Service and Lodging Managers	5.80	5.85	6.00
General Managers and Top Executives	9.00	23.95	62.50
Industrial Production Managers	14.00	19.69	33.03
Marketing, Advertising and Public Relations Managers	6.50	22.80	44.94
Medicine and Health Services Managers	12.50	17.75	23.00
Personnel, Training and Labor Relations Managers	4.25	18.12	41.00
Purchasing Managers	8.80	10.18	12.00
Professional, Paraprofessional and Technical Occupations			
Accountants, Auditors and Other Financial Specialists	6.65	17.23	25.82
Chemical Engineers	21.67	22.50	30.00
Chemical Technicians and Technologist	11.92	13.66	17.33
Chemists, Except Biochemists	20.20	24.24	32.21
Computer Programmer Aides	5.00	9.36	11.00
Computer Programmers	8.25	16.25	19.21
Cost Estimators	13.00	15.64	20.55
Dietitians and Nutritionists	5.50	8.54	10.06
Electrical and Electronic Engineers	21.63	21.63	21.63
Electrical and Electronic Technicians	13.50	15.05	17.30
Industrial Engineers, Except Safety	12.74	17.84	19.89
Instructors and Coaches, Sports and Physical Training	8.00	8.22	10.00
Licensed Practical Nurses	8.13	9.30	10.00
Mechanical Engineers	19.00	20.10	20.19
Pharmacists	18.00	20.72	22.33
Purchasing Agents and Buyers	8.00	17.11	36.83
Recreation Workers	6.30	7.15	8.00
Registered Nurses	10.00	12.37	15.03
Social Workers, except Medical and Psychiatric	8.25	8.49	8.59
Surveyors and Mapping Scientists	10.00	10.37	10.92
Systems Analysts, Electronic Data Processing	17.41	21.02	22.00
Teachers, Preschool and Kindergarten	8.82	9.83	11.25

Berkeley and Dorchester Counties

	Hourly Wage (\$)		
	Min.	Ave.	Max.
<i>Sales and Related Occupations</i>			
<i>Cashiers</i>	4.25	4.66	6.00
<i>First Line Sales Supervisors</i>	6.25	11.03	35.00
<i>Sales Agents, Selected Business Services</i>	7.70	9.09	13.24
<i>Salespersons, Parts</i>	5.97	7.08	10.00
<i>Salespersons, Retail</i>	4.59	8.65	20.00
<i>Stock Clerks, Sales Floor</i>	4.35	5.18	6.12
<i>Clerical and Administrative Support Occupations</i>			
<i>Billing, Cost and Rate Clerks</i>	5.65	9.70	13.75
<i>Bookkeeping, Accounting and Auditing Clerks</i>	5.50	9.05	13.46
<i>Computer Operators, except Peripheral Equipment</i>	7.03	10.94	12.14
<i>Customer Service Representatives, Utilities</i>	9.76	9.76	9.77
<i>Data Entry Keyers, except Composing</i>	6.23	8.24	9.05
<i>Dispatchers, except Police, Fire and Ambulance</i>	7.00	10.53	15.00
<i>General Office Clerks</i>	5.50	8.64	11.32
<i>Hotel Desk Clerks</i>	4.25	5.38	5.75
<i>Loan and Credit Clerks</i>	7.06	7.07	7.08
<i>Meter Readers, Utilities</i>	9.95	11.13	12.48
<i>New Accounts Clerks</i>	7.61	8.00	8.39
<i>Order Clerks-Materials, Merchandise and Service</i>	6.00	6.58	7.15
<i>Payroll and Timekeeping Clerks</i>	6.40	9.19	12.09
<i>Personnel Clerks, except Payroll and Timekeeping</i>	7.03	10.02	14.51
<i>Receptionists and Information Clerks</i>	4.68	6.96	9.75
<i>Secretaries</i>	5.75	9.83	12.31
<i>Shipping, Receiving and Traffic Clerks</i>	6.15	9.01	11.26
<i>Stock Clerks-Stockroom, Warehouse or Storage</i>	4.40	6.71	10.00
<i>Supervisors, Administrative Support Occupation</i>	6.10	14.19	25.17
<i>Teachers' Aides and Education Assistants</i>	4.81	5.93	6.85
<i>Tellers</i>	5.68	5.88	5.98
<i>Typists</i>	8.17	8.60	12.28
<i>Typists, Word Processing Equipment</i>	5.25	5.94	6.25
<i>Service Occupations</i>			
<i>Bartenders</i>	2.13	4.27	6.00
<i>Butchers and Meat Cutters</i>	8.35	9.02	9.90
<i>Child Care Workers</i>	5.00	5.15	5.00
<i>Combined Food Preparation and Service Workers</i>	4.25	4.54	5.24
<i>Cooks, Institution or Cafeteria</i>	4.81	6.66	5.50
<i>Cooks, Restaurant</i>	4.90	6.89	14.04
<i>Cooks, Short Order</i>	4.29	5.16	6.00
<i>Food Preparation Workers</i>	4.46	5.15	8.00
<i>Guards and Watch Guards</i>	4.02	5.73	10.00

Berkeley and Dorchester Counties

	Hourly Wage (\$)		
	Min.	Ave.	Max.
<i>Hosts and Hostesses</i>	5.00	5.19	5.50
<i>Housekeepers</i>	4.81	5.00	5.03
<i>Janitors and Cleaner, except Maids and Housekeepers</i>	4.35	7.02	12.28
<i>Maids and Housekeeping Cleaners</i>	4.25	4.48	4.81
<i>Nursing Aides, Orderlies and Attendants</i>	5.00	5.25	7.54
<i>Pharmacy Assistants</i>	4.75	5.15	5.63
<i>Waiters and Waitresses</i>	2.13	3.70	4.25
 <i>Agricultural, Forestry, Fishing and Related Occupations</i>			
<i>Gardeners and Groundskeepers, except Farm</i>	7.75	8.03	10.00
<i>Log Handling Equipment Operators</i>	6.00	8.74	9.42
 <i>Production, Construction, Operating, Maintenance and Material Handling Occupations</i>			
<i>Assemblers and Fabricators</i>	7.79	9.03	10.11
<i>Automotive Body and Related Repairers</i>	9.34	9.67	10.00
<i>Automotive Mechanics</i>	7.50	11.26	14.00
<i>Boiler Operator/Tenders, Low pressure</i>	10.22	14.59	16.17
<i>Bus Drivers</i>	4.40	5.06	5.21
<i>Bus and Truck Mechanics and Diesel Engine Specialists</i>	9.05	11.86	16.61
<i>Cabinetmakers and Bench Carpenters</i>	9.38	9.69	10.00
<i>Carpenters</i>	10.00	11.03	11.50
<i>Chemical Equipment Controllers/Operators</i>	12.40	12.77	14.43
<i>Concrete and Terrazzo Finishers</i>	8.00	10.75	11.00
<i>Conveyor Operators and Tenders</i>	5.38	8.48	13.20
<i>Crane and Tower Operators</i>	11.26	12.43	14.50
<i>Crushing/Grinding/Mixing Machine Operators</i>	10.25	10.25	10.25
<i>Electrical Powerline Installers and Repairers</i>	15.28	15.87	16.50
<i>Electricians</i>	12.85	15.97	17.33
<i>Extruding Machine Setters/Operators (Metal/Plastic)</i>	7.12	7.90	8.38
<i>First-Line Supervisors, Construction/Extractive</i>	13.63	15.61	18.33
<i>First-Line Supervisors, Helpers and Laborers</i>	12.08	12.64	14.90
<i>First-Line Supervisors, Mechanics</i>	8.75	18.48	29.24
<i>First-Line Supervisors, Production</i>	7.05	16.18	21.84
<i>Freight, Stock and Material Movers, Hand</i>	4.36	9.28	14.71
<i>Furnace, Kiln, Oven, Drier or Kettle Operators</i>	5.00	12.31	16.88
<i>Grader, Dozer and Scraper Operators</i>	14.46	15.04	16.09
<i>Grinding and Polishing Workers, Hand</i>	4.98	5.39	5.60
<i>Hand Packers and Packagers</i>	4.25	6.93	11.57
<i>Head Sawyers</i>	9.00	9.52	9.78
<i>Heat Treating, Tempering Machine Operators</i>	11.63	12.00	14.51
<i>Helpers, Carpenters</i>	7.40	7.44	7.50
<i>Helpers, Electricians</i>	6.03	6.78	8.33
<i>Industrial Truck and Tractor Operators</i>	5.75	9.37	13.53

Berkeley and Dorchester Counties

	Hourly Wage (\$)		
	Min.	Ave.	Max.
<i>Laundry and Drycleaning Machine Operators</i>	4.50	4.88	5.00
<i>Machine Feeders and Offbearers</i>	5.25	8.90	9.00
<i>Machinery Maintenance Mechanics</i>	11.55	15.01	16.51
<i>Machinists</i>	9.75	11.54	14.78
<i>Maintenance Repairers, General Utility</i>	8.33	13.98	17.33
<i>Metal Fabricators, Structural Metal Products</i>	6.00	10.27	10.88
<i>Numerical Control Machine Tool Operators (Metal/Plastic)</i>	8.00	10.04	10.60
<i>Operating Engineers</i>	8.00	9.21	11.63
<i>Precision Inspectors, Testers and Graders</i>	8.53	11.51	16.17
<i>Press, Brake Machine Setters/Operators (Metal/Plastic)</i>	6.29	6.68	9.20
<i>Production Inspectors, Testers, Graders, Sorters</i>	6.30	10.05	12.54
<i>Sawing Machine Operators/Tenders</i>	5.91	8.16	9.92
<i>Structural Metal Workers</i>	11.00	12.50	13.50
<i>Textile Machine Operators/Tenders</i>	5.08	7.36	7.64
<i>Textile Machine Setter/Operators</i>	13.45	13.45	13.45
<i>Tire Repairers and Changers</i>	5.25	6.38	7.00
<i>Tool Grinders, Filers and Sharpeners</i>	8.65	10.56	14.78
<i>Tool and Die Makers</i>	7.50	15.30	15.95
<i>Truck Drivers, Heavy or Tractor Trailer</i>	7.95	9.27	13.20
<i>Truck Drivers, Light-Including Delivery</i>	4.75	7.15	13.20
<i>Vehicle and Equipment Cleaners</i>	5.50	5.84	6.40
<i>Water and Liquid Waste Treatment Plant Operators</i>	14.04	15.41	17.33
<i>Welders and Cutters</i>	9.50	11.07	11.25
<i>Welding Machine Setters/Operators</i>	10.29	10.87	12.60
<i>Woodworking Machine Operator/Tenders</i>	6.00	8.53	9.80

Source: SC Employment Security Commission. *The SC Wage Survey, 1992.*

Charleston County

	Hourly Wage (\$)		
	Min.	Ave.	Max.
Managerial and Administrative Occupations			
<i>Administrative Services Manager</i>	6.55	11.07	20.54
<i>Communications, Transportation and Utilities Managers</i>	12.50	16.54	21.63
<i>Construction Managers</i>	7.50	17.55	26.20
<i>Education Administrators</i>	12.00	23.99	29.45
<i>Engineering, Mathematical and Science Managers</i>	12.00	29.20	37.02
<i>Financial Managers</i>	12.00	20.29	36.00
<i>Food Service and Lodging Managers</i>	7.03	10.76	17.64
<i>General Managers and Top Executives</i>	10.00	28.57	63.00
<i>Industrial Production Managers</i>	12.00	17.48	28.32
<i>Marketing, Advertising and Public Relations Managers</i>	10.00	20.90	40.00
<i>Medicine and Health Services Managers</i>	21.50	21.79	21.80
<i>Personnel, Training and Labor Relations Managers</i>	6.15	16.74	28.25
<i>Property and Real Estate Managers</i>	16.47	18.03	21.15
<i>Purchasing Managers</i>	7.50	13.93	19.50
Professional, Paraprofessional and Technical Occupations			
<i>Accountants, Auditors and Other Financial Specialist</i>	8.00	11.79	21.17
<i>Announcers</i>	4.63	7.86	8.40
Artists and Related Workers			
<i>Chemical Engineers</i>	25.63	28.56	28.85
<i>Chemical Technicians and Technologists</i>	10.60	13.20	13.46
<i>Chemists, except Biochemists</i>	16.82	17.48	18.30
<i>Civil Engineers, including Traffic</i>	14.17	16.22	21.00
<i>Computer Programmer Aides</i>	9.00	12.70	19.39
<i>Computer Programmers</i>	9.75	14.12	22.02
<i>Cost Estimators</i>	12.50	17.31	19.38
<i>Designers, except Interior Designers</i>	9.27	10.30	12.37
<i>Drafters</i>	8.89	10.78	11.12
<i>Electrical and Electronic Engineers</i>	17.33	19.29	23.60
<i>Electrical and Electronic Technicians</i>	9.42	13.78	15.98
<i>Employment Interviewers Employment Service</i>	9.00	10.88	11.50
<i>Industrial Engineers, except Safety</i>	12.50	13.94	14.90
<i>Instructors and Coaches, Sports and Physical Training</i>	5.00	9.19	14.00
<i>Instructors, Nonvocational Education</i>	10.25	10.96	16.64
<i>Interior Designers</i>	10.00	23.33	30.00
<i>Lawyers</i>	15.25	38.21	100.00
<i>Licensed Practical Nurses</i>	9.90	10.31	12.45
<i>Mechanical Engineers</i>	18.70	19.16	20.55
<i>Paralegal Personnel</i>	9.80	11.84	13.50
<i>Personnel, Training and Labor Relations Specialists</i>	16.13	16.93	18.15

Charleston County

	Min.	Hourly Wage (\$) Ave.	Max.
<i>Pharmacists</i>	18.64	18.67	19.93
<i>Photographers</i>	7.38	11.99	14.62
<i>Physical Therapists</i>	16.64	17.73	22.00
<i>Physicians and Surgeons</i>	32.93	63.52	100.00
<i>Professional Librarians</i>	10.05	12.26	17.88
<i>Public Relations Specialists and Publicity Writers</i>	6.34	7.56	10.00
<i>Purchasing Agents and Buyers</i>	7.46	11.50	16.00
<i>Recreation Workers</i>	5.50	6.09	10.50
<i>Registered Nurses</i>	16.20	16.20	16.20
<i>Social Workers, except Medical and Psychiatric</i>	8.00	13.29	14.00
<i>Systems Analysts, Electronic Data Processing</i>	13.00	19.60	23.07
<i>Teachers, Elementary School</i>	10.83	14.10	19.70
<i>Teachers, Preschool and Kindergarten</i>	8.50	9.73	14.00
<i>Writers and Editors</i>	13.68	28.41	35.35
Sales and Related Occupations			
<i>Cashiers</i>	4.25	4.94	6.38
<i>Door-to-Door Vendors and Solicitors</i>	4.25	4.40	5.00
<i>First Line Sales Supervisors</i>	6.13	11.34	16.41
<i>Sales Agents and Placers, Insurance</i>	9.62	10.68	13.60
<i>Sales Agents, Advertising</i>	12.00	17.69	20.65
<i>Sales Agents, Selected Business Services</i>	7.50	11.60	16.62
<i>Sales Representatives, except Scientific Products</i>	6.00	13.66	16.00
<i>Sales Representatives, Scientific Products</i>	12.00	14.00	16.00
<i>Salespersons, Parts</i>	6.00	8.43	10.46
<i>Salespersons, Retail</i>	4.56	6.89	11.00
<i>Stock Clerks, Sales Floor</i>	4.88	5.30	6.15
Clerical and Administrative Support Occupations			
<i>Adjustment Clerks</i>	5.93	6.82	8.91
<i>Bill and Account Collectors</i>	8.38	8.41	8.44
<i>Billing, Cost and Rate Clerks</i>	5.22	7.80	10.14
<i>Billing, Posting, Calculating Machine Operators</i>	9.00	9.00	9.00
<i>Bookkeeping, Accounting and Auditing Clerks</i>	6.12	8.89	12.38
<i>Computer Operators, except Peripheral Equipment</i>	7.00	9.46	12.77
<i>Data Entry Keyers, except Composing</i>	6.23	7.21	8.74
<i>Dispatchers, except Police, Fire and Ambulance</i>	8.87	10.69	14.38
<i>File Clerks</i>	5.25	5.92	7.00
<i>General Office Clerks</i>	6.25	8.01	15.00
<i>Hotel Desk Clerks</i>	5.00	5.71	6.00
<i>Insurance Claims Clerks</i>	5.32	7.26	9.20
<i>Insurance Policy Processing Clerks</i>	7.87	7.87	7.87

Charleston County

	Hourly Wage (\$)		
	Min.	Ave.	Max.
<i>Loan Interviewers</i>	7.51	8.16	10.40
<i>Loan and Credit Clerks</i>	6.20	8.62	10.63
<i>Mail Clerks, except Mail Machine Operators</i>	6.09	6.61	7.11
<i>Mail Machine Operators, Preparation and Handling</i>	4.60	6.73	6.94
<i>Messengers</i>	4.27	4.90	5.95
<i>New Account Clerks</i>	7.51	9.79	10.97
<i>Order Clerks Materials, Merchandise and Service</i>	5.60	9.79	13.55
<i>Order Fillers, Wholesale and Retail Sales</i>	4.75	6.01	7.00
<i>Payroll and Timekeeping Clerks</i>	6.25	9.51	13.79
<i>Personnel Clerks, except Payroll and Timekeeping</i>	6.00	8.95	12.02
<i>Production, Planning and Expediting Clerks</i>	5.00	9.91	14.50
<i>Real Estate Clerks</i>	7.74	9.19	9.92
<i>Receptionists and Information Clerks</i>	5.50	6.37	8.67
<i>Secretaries</i>	6.75	8.32	10.24
<i>Shipping, Receiving and Traffic Clerks</i>	5.71	9.01	13.55
<i>Stock Clerks/Stockroom, Warehouse or Storage</i>	5.00	6.64	7.58
<i>Supervisors, Administrative Support Occupation</i>	5.85	10.17	15.63
<i>Switchboard Operators</i>	6.00	6.12	8.46
<i>Teachers' Aides and Education Assistants</i>	6.00	6.95	6.50
<i>Tellers</i>	6.23	7.53	7.82
<i>Typists</i>	4.42	7.53	9.04
<i>Typists, Word Processing Equipment</i>	6.75	8.00	12.00
Service Occupations			
<i>Baggage Porters and Bellhops</i>	4.25	4.26	4.35
<i>Bakers, Bread and Pastry</i>	4.75	6.67	10.00
<i>Bartenders</i>	2.13	4.24	5.50
<i>Butchers and Meat Cutters</i>	6.50	8.90	12.50
<i>Child Care Workers</i>	5.00	5.67	6.00
<i>Combined Food Preparation and Service</i>	4.49	4.51	4.88
<i>Cooks, Institution or Cafeteria</i>	5.00	6.75	7.10
<i>Cooks, Restaurant</i>	6.00	6.89	8.00
<i>Cooks, Short Order</i>	4.50	5.40	7.22
<i>Counter Attendants-Lunchroom, Coffee Shop or Cafeteria</i>	4.50	4.95	5.10
<i>Dining and Cafeteria Attendants and Bartender Helpers</i>	3.00	3.09	4.75
<i>Food Preparation Workers</i>	4.50	5.29	5.87
<i>Guards and Watch Guards</i>	5.50	6.54	12.58
<i>Hosts and Hostesses</i>	2.13	4.11	5.50
<i>Housekeepers</i>	4.25	7.18	9.90
<i>Janitors and Cleaners, except Maids and Housekeepers</i>	4.25	5.26	7.00
<i>Maids and Housekeeping Cleaners</i>	4.78	5.46	16.67
<i>Medical Assistants</i>	5.05	7.08	10.25

Charleston County

	Hourly Wage (\$)		
	Min.	Ave.	Max.
<i>Nursing Aides, Orderlies and Attendants</i>	4.80	5.58	5.91
<i>Physical and Corrective Therapy Assistants</i>	11.90	12.04	14.42
<i>Waiters and Waitresses</i>	2.09	2.65	6.91
Agricultural, Forestry, Fishing and Related Occupations			
<i>Gardeners and Groundskeepers, except Farm</i>	5.00	5.67	6.30
Production, Construction, Operating, Maintenance and Material Handling Occupations			
<i>Assemblers and Fabricators</i>	5.50	5.55	6.00
<i>Automotive Body and Related Repairers</i>	7.75	9.18	9.90
<i>Automotive Mechanics</i>	8.15	13.15	16.35
<i>Bus and Truck Mechanics and Diesel Engine Specialists</i>	9.21	9.68	11.50
<i>Captains, Water Vessel</i>	10.50	12.38	15.20
<i>Carpenters</i>	8.42	9.56	10.00
<i>Cementing and Gluing Machine Operators/Tenders</i>	4.50	6.00	9.93
<i>Chemical Equipment Tenders</i>	6.10	7.39	8.14
<i>Coating/Painting/Spraying Machine Operators</i>	6.00	7.97	10.00
<i>Concrete and Terrazzo Finishers</i>	6.84	8.82	9.00
<i>Crushing/Grinding/Mixing Machine Operators</i>	5.00	7.70	8.97
<i>Cutting and Slicing Machine Operators/Tenders</i>	7.44	8.22	8.64
<i>Driver and Sales Workers</i>	9.80	9.92	10.10
<i>Electric Motor, Transformer and Related Repairers</i>	7.15	7.67	10.00
<i>Electrical and Electronic Assemblers</i>	7.07	7.24	8.42
<i>Electricians</i>	8.68	15.61	17.08
<i>Extruding/Forming/Pressing Operators/Tenders</i>	5.10	5.48	8.64
<i>First-Line Supervisors, Construction/Extractive</i>	6.35	13.43	20.11
<i>First-Line Supervisors, Helpers and Laborers</i>	4.35	9.31	10.87
<i>First-Line Supervisors, Mechanics</i>	7.50	15.09	23.17
<i>First-Line Supervisors, Production</i>	8.00	19.20	26.00
<i>First-Line Supervisors, Transportation</i>	12.64	15.52	22.00
<i>Freight, Stock and Material Movers, Hand</i>	5.00	5.71	12.17
<i>Furniture Finishers</i>	8.00	8.67	10.00
<i>Grader, Dozer and Scraper Operators</i>	7.50	7.80	7.91
<i>Hand Packers and Packagers</i>	4.25	4.85	6.00
<i>Heating, A. C. and Refrigeration Mechanics</i>	8.50	10.70	11.43
<i>Helpers, Carpenters</i>	6.50	7.32	7.75
<i>Helpers, Electricians</i>	9.28	10.66	11.00
<i>Helpers, Mechanics and Repairers</i>	6.00	6.98	8.25
<i>Industrial Truck and Tractor Operators</i>	7.25	8.54	9.00
<i>Laundry and Drycleaning Machine Operators</i>	4.50	5.40	6.53
<i>Machine Assemblers</i>	7.99	9.26	9.52
<i>Machinery Maintenance Mechanics</i>	7.95	10.41	12.50

Charleston County

	Hourly Wage (\$)		
	Min.	Ave.	Max.
Machinists	9.68	10.87	13.00
Maintenance Repairers, General Utility	6.00	10.54	15.00
Metal Fabricators, Structural Metal Products	8.25	8.97	14.00
Millwrights	17.08	17.08	17.08
Mobile Heavy Equipment Mechanics, except Engines	9.97	10.07	11.00
Operating Engineers	12.00	12.31	14.50
Package and Filling Machine Operators/Tenders	4.80	6.42	8.90
Painters, Transportation Equipment	8.50	8.96	11.00
Paper Goods Machine Setters/Operators	6.20	9.44	11.75
Paving, Surfacing and Tamping Equipment	6.71	7.00	7.50
Plumbers, Pipefitters and Steamfitters	9.80	12.66	13.55
Precision Instruments Repairers	16.07	16.12	16.50
Precision Lithography and Photoengraving	7.05	9.22	10.67
Printing Press Machine Operators/Tenders	10.00	11.45	11.77
Production Inspectors, Testers, Graders, Sorters	5.00	6.45	7.94
Sheet Metal Duct Installers	8.63	9.97	10.42
Sheet Metal Workers	9.45	10.92	11.11
Tire Repairers and Changers	5.50	6.61	7.10
Truck Drivers, Heavy or Tractor Trailer	6.10	10.34	16.26
Truck Drivers, Light-Including Delivery	5.30	9.91	13.28
Vehicle and Equipment Cleaners	5.00	5.18	5.88
Water and Liquid Waste Treatment Plant Operators	16.50	16.65	16.80
Welders and Cutters	9.50	10.58	11.72

Source: SC Employment Security Commission. The SC Wage Survey, 1992.

**Cost of Living Index
Charleston MSA**

Item	Index
Composite Index	99.6
Grocery Items	93.6
Housing	96.9
Utilities	96.7
Transportation	96.4
Health Care	105.6
Misc. Goods & Services	104.8

Source: ACCRA Cost of Living Index, Vol. 27, No. 1, ISSN 0740-7130, First Quarter 1994.

CONSTRAINTS AND POTENTIALS

CONSTRAINTS AND POTENTIALS

BASE CLOSURE

There has been much "ballyhoo" regarding the affects of the defense drawdown. According to the Report of the Defense Conversion Commission titled "Adjusting to the Drawdown", the conversion process is viewed in conflicting ways; "as an opportunity to convert the defense industry to peacetime uses, as a drain on the economy, as a budgetary source of "peace dividends", or as a reward for winning the Cold War."¹ Confusing, yes - enlightening, no.

The cold facts are discouraging. The truth is that from the private sector the past record of defense conversion, according to Martin Marietta chairman and CEO Norman Augustine, is "unblemished by success."² This is not only one man's opinion. The 1990 report to Congress by the Arms Control & Disarmament Agency somberly agrees by stating, "detailed research has not identified a successful product in our economy today which was developed through a military-to-civilian approach."² Yet in spite of the inability of the private sector to adapt to the military drawdowns of the past, the public sector still feels compelled to attempt what the private sector has never been able to do.

What are the implications for Charleston. It seems that based on the past, it is unreasonable to assume that present industrial operations can be salvaged in their present form. Those industries that have military contracts are specialized in their areas of expertise but probably can't compete outside of their own market niche, even though there may be some similarities. In short, accept the inevitable and start initiating economic development policies to recruit industry as well as to grow industry at home.

The Defense Authorization Act of 1993 is an initiative from the current administration intended to "fast track" the reuse of closed bases by accelerating the process of transferring surplus military property into the hands of local development agencies and private sector developers.⁴ (Reference Appendix 5 - Executive Order 12788 and 12.607 Community Planning and Assistance Program) There are five components to this program as follows:

- *Job-centered property disposal, with priority to economic redevelopment.*
- *Fast-track cleanup relating to hazardous wastes and other environmental questions.*
- *Expedited transition and redevelopment assistance for both workers and their communities.*
- *Transition coordinators, assigned to bases to be closed or severely realigned.*
- *Economic adjustment grants for affected communities*

Handled properly, a base closure can lead to new economic vibrancy. Closed facilities leave behind air strips and runway systems that adapt well to regional or private airport development - with plenty of developable land adjacent. In addition, they leave behind port facilities, already

in place, just waiting for companies that need adjacency to waterborne shipping. Furthermore, they leave behind a variety of facilities adaptable to many uses, including manufacturing, offices, laboratories, back offices and usually at very reasonable costs. So significant is the national economic impact of military cutbacks that the conversion of closed facilities is an industry in itself with its own trade association - the National Association of Installation Developers (NAID). On the public side, the Department of Defense has within its agency the Office of Economic Adjustment (OEA) that assists communities adversely affected by closures, realignments, and cuts in defense industry employment.³

According to the President's Economic Adjustment Committee, there appear to be ten principles that have characterized successful economic conversion strategies:⁶

Unity - Defense job losses, whether from military installations or from defense plants, are no respecter of city limits or jurisdictional county boundaries. The entire community is affected and the solution lies in cooperative efforts toward a common goal.

Organization - The success of community efforts have been greatly enhanced by the early development of action committees dedicated to the formulation of policy objectives and goals.

Plan - Organizational action without a charted direction is at best inefficient and at worst totally ineffective. Typically, the first task is to develop a strategy that will use the assets of the about-to-be deactivated base. The plans must, however, remain flexible.

Leadership - The conversion of bases to civil uses or the filling of a former defense plant with new civil activity is almost always a grass roots enterprise that calls for strong, capable local leaders.

Advice - There is a considerable amount of information available from consultants outside professionals and consultants that do not necessarily have to be from the Charleston Harbor Area. Similar experiences are an invaluable asset as well as an objective outside opinion.

Acquisition - Expanding industry gravitates to localities that have suitable land and buildings to accommodate manufacturing and commerce. Most base closing offer this resource but should not be used to drive local economic development policy. Instead, available properties should be viewed as just another alternative.

Development - Raw resources are seldom as attractive as facilities specifically designed to meet the need of commerce and industry. Property acquisition and property development are not synonymous.

Promotion - The hardest and most sensitive step in repopulating a former base of Defense plant is the campaign to attract industry. A good sales strategy tailored to a community's most convincing attributes is essential.

Management - Industrial enclaves, whether on a former military facility or located elsewhere, prosper over the long term through good management. The same principles that guide commercial and industrial real estate development apply.

Reflection - A sense of urgency that helps to strengthen the community's ties to the proper agencies in the state and federal government should always be pursued.

Economic Impact

The economic impact to the Charleston area will be significant. Based on a study performed by the Charleston Trident Chamber of Commerce there will be a total of 21,902 jobs lost with a resultant annual payroll reduction of \$644.0 million. This loss, however, will be countered by an expansion of 6,165 jobs and payroll of \$251.0 million at the NAVALEX (Naval Electronic Systems Engineering Center). The following tables illustrate the various statistics associated with the base closure:

EMPLOYMENT IMPACT

FACILITIES TO CLOSE OR REALIGN:

	<i>Active</i>	<i>Civilian</i>	<i>Contract</i>	<i>Total</i>
<i>Naval Shipyard</i>	<i>14,990</i>	<i>1,071</i>	<i>93</i>	<i>16,154</i>
<i>Shipyard</i>	<i>64</i>	<i>5,000</i>	<i>0</i>	<i>5,064</i>
<i>Defense Distribution Depot</i>	<i>5</i>	<i>291</i>	<i>0</i>	<i>296</i>
<i>Supply Center</i>	<i>17</i>	<i>357</i>	<i>14</i>	<i>388</i>
<i>Total</i>	<i>15,076</i>	<i>6,719</i>	<i>107</i>	<i>21,902</i>

FACILITIES RETAINED OR EXPANDED:

	<i>Active</i>	<i>Civilian</i>	<i>Contract</i>	<i>Total</i>
<i>NAVELEX</i>	<i>10</i>	<i>1,051</i>	<i>3,320</i>	<i>4,380</i>
<i>Shipyard</i>	<i>0</i>	<i>120</i>	<i>0</i>	<i>120</i>
<i>Supply Center</i>	<i>5</i>	<i>131</i>	<i>0</i>	<i>136</i>
<i>Hospital</i>	<i>898</i>	<i>427</i>	<i>204</i>	<i>1,529</i>
<i>Total</i>	<i>913</i>	<i>1,728</i>	<i>3,524</i>	<i>6,165</i>

Source: Center for Business Research, Charleston Trident Chamber of Commerce.

PAYROLL IMPACT (TIMES X \$1,000)

FACILITIES TO CLOSE OR REALIGN:

	<i>Active</i>	<i>Civilian</i>	<i>Contract</i>	<i>Total</i>
<i>Naval Shipyard</i>	336,300	27,567	2,519	396,386
<i>Shipyard</i>	4,572	221,930	0	226,502
<i>Defense Distribution Depot</i>	233	10,047	0	10,280
<i>Supply Center</i>	1,017	9,606	426	11,049
<i>Total</i>	372,122	269,150	2,945	644,217

FACILITIES RETAINED OR EXPANDED:

	<i>Active</i>	<i>Civilian</i>	<i>Contract</i>	<i>Total</i>
<i>NAVELEX</i>	436	48,258	127,267	175,961
<i>Shipyard</i>	4,572	5,326	0	9,898
<i>Supply Center</i>	299	3,525	0	3,824
<i>Hospital</i>	40,892	12,072	9,305	62,269
<i>Total</i>	46,199	69,181	136,572	251,952

Source: Center for Business Research, Charleston Trident Chamber of Commerce.

INDIRECT ECONOMIC IMPACT

Sector	Indirect Jobs	(\$000) Indirect Earnings	(\$000) Total Indirect Economic Impact
Agriculture & Mining	127	1,358	3,709
Construction	251	5,068	11,182
Manufacturing	373	6,688	27,692
Transportation, Communications & Public Utilities	431	12,174	49,010
Trade	3,287	44,674	95,774
Real Estate	200	3,344	93,978
Health Services	806	20,168	36,052
Other Services	3,334	41,068	114,898
Households	386	2,508	137,156
Total	9,195	137,050	569,451

Source: Center for Business Research, Charleston Trident Chamber of Commerce.- U.S Bureau of Economic Analysis, Regional Input-Output Modeling System

Military Base Reuse

The Office of Economic Adjustment (OEA) has compiled a history of over 29 years of Military Base Reuse to identify military and civilian job losses, the replacement of civilian jobs and the principal industrial/commercial public reuse activities along with the industrial contacts who can provide additional information. A summary of this data is attached in the following pages which may provide insight into those types of activities which have been successful.

The OEA has determined that the following collective experience has been recorded:⁵

- **New Jobs Replace DOD Civilian Losses:** A total of 158,104 civilian jobs are now located on the former Defense facilities to replace the loss of 93,424 former civilian DoD and contractor jobs.
- **New Educational Opportunities:** A number of four-year colleges, and post-secondary vocational institutions or community colleges, as well as high school vo-tech programs have been established on former military bases.
- **Student Enrollments:** There are 73,253 college and post-secondary students; 25,055 secondary vo-tech students; and 62,156 trainees receiving education and training at 57 former military bases.
- **Industrial and Aviation Uses:** Office industrial parks or plants have been established at 76 of the former Defense bases. Forty-two of the former bases are being used as municipal or general aviation airports.

The OEA has speculated that there is a transition period of between 3-5 years in securing the new civilian uses. Additionally they have provided a survival guide for base closings:

A SURVIVAL GUIDE FOR BASE CLOSINGS

1. Don't fight it. Get on with the planning.
2. Create an effective local organization to set policy. But keep it small.
3. Take control of the planning.
4. Negotiate as much lead time as possible for the final date of closure, if possible.
5. Bargain as hard as you can with the federal government about what it will give you.
6. Beware of environmental hazards. Old military sites are often sites of large underground tank farms and asbestos-ridden buildings. Make sure the federal government cleans them up or assumes liability for them.
7. Watch out for hidden costs.
8. If you don't have the expertise, hire it. But don't get involved in a long term contract.
9. Find someone in Washington who can act as a liaison between you community and the various federal agencies you must deal with.
10. Consider joining the National Association of Installation Developers.

A typical Base Closure can be illustrated on a generic time line on the following graphic showing the major actions that need to be established by the Department of Defense and the

community in order to close a base - and how they relate to each other.⁷ Even though this time line may not specifically apply to the current situation at Charleston, it is nonetheless representative of the sequential order of activities that will occur. The key element to success is *organization*. This necessarily includes overall coordination, planning and implementation. While this may seem on the surface to be a logical conclusion, it is not small undertaking and requires the cooperation of the entire community - public and private.

It is not necessary to recreate the wheel when faced with a base closure. Where appropriate, existing organizations can take on the lead responsibility. For example, a chamber of commerce, are-wide planning/development council, local and regional economic development groups or special authorities (ie. Port authorities) already have the expertise and resources to perform the necessary recruitment activities. Usually, supplemental support to add staff and funding will provide a far greater return on effort due to the critical mass already present in these organizations as opposed to the creation of a separate entity. Furthermore, the sharing of resources with diverse groups toward a common goal further promotes the efficacy of these recruitment efforts. This has historically been a problem of many communities and is probably more severe in Charleston than in most.

There is a general decline in Federal program resources, along with greater control of Federal block grants by states. As a result, the states will play a greater role in the development and implementation of economic development programs for communities hard hit by base closures. In addition, the responsibility of communities and their respective private sectors will be equally important. If the community has elected to perform recruitment in a vacuum without the assistance of the state, or conversely if the state has not provided the necessary support to the community the community will face an impossible task.

The following excerpt from the Federal Planner's Network is an appropriate guideline to consider when determining the organization, planning and implementation of a program to counter the effects of base closures:⁷

Organization

- | | |
|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| What? | Large, urban communities usually have organizational mechanisms to deal with the problem. Often the responsibility for coordination, planning and implementation can readily be assigned to some existing agency or authority. Most communities need to establish a task force or council to coordinate activities and address the specialized issues a base closure creates. |
| Who? | This organization should reflect a cross section of public and private sector leadership. It is not a "blue ribbon" committee created to give |

visibility to certain individuals and no commitment of action. It must be a core of dedicated, strong, knowledgeable, capable individuals that can get the job done quickly, with the communities future uppermost in their minds with a track record of accomplishments to prove it. The organization must be structured to suit the magnitude of the problem and time frame for closure. About six to eight members is usually sufficient. The members should be non partisan and often should have memberships that are multi-jurisdictional to represent the impact area.

- Type? Usually a new, often temporary or transitional, economic adjustment council, task force or steering committee is created. The initial committee is destined for replacement.
- Purpose? The major function of the organization is to be the focal point for the community adjustment activities and for Federal Government interaction with the community. It is also the forum for community issues and concerns, provides policy guidance on local economic adjustment activities. It usually develops the economic recovery strategy (action plan) and base reuse plan.
- Goals? The organization must provide leadership and build consensus within the community to coalesce diverse interests. As a forum, it is a place to express ideas. The organization need to develop a strategy that sets the future development direction and provides vision. This adjustment strategy needs to focus on job creation of a balanced base reuse plan that provides a reasonable mix of public and private uses with complementary land uses. A property acquisition plan and scheme for operation of the base must also be prepared. Vitally important is keeping momentum and interest by ensuring public awareness about recovery efforts. This can be done through relations with the media, and perhaps with a newsletter that describes activities of the organization.
- Authority? Typically the authority is advisory only. However, it could have limited purposes, prescribed by the local, regional or state laws. These might be base reuse planning, redevelopment, and/or management and operations. If recovery responsibilities have been vested in legally established entities, like and airport, port or economic development authority, and agencies of local or state government, mandates and authorities are already established. These may require augmentation to undertake economic adjustment.
- Operation? To maximize citizen participation, a structure of subcommittees in functional areas should be formed. The number and titles of the

subcommittees should be determined according to the magnitude of the closure impact and extent of need. Their purpose is to expand the scope of the capabilities of the organization, broaden community participation in the economic adjustment process, explore, deliberate and make recommendations on approaches and base reuse options. Likely areas of concern would be:

Education	Manpower Training
Health	Base Reuse Planning
Finance	Transportation
Tourism	Environmental Quality
Recreation	Economic Development
Housing	Public Works (Utilities)

Staff?

To function efficiently and be effective, the adjustment organization needs a small staff. A director or coordinator with one or two supporting staff members should be sufficient. However, its capabilities can be expanded by using or allying with existing organizations such as planning commissions, economic development agencies, airport and port authorities, or other local, county and state agencies. Professional help should be sought by contracting for studies, economic adjustment strategies and base reuse plans

BASE CLOSURE PROCESS

YEAR 1	Year 2	Year 3	Year 4
<u>Military Actions</u>			
Announcement and Congress Action			
Budget New Facilities			
Design & Construct New Facilities			
Identify Excess			
Holding Agency Property Actions			
Base Closing Process			
Base Property Disposal			
Detailed Screening	Disposal Agency Actions	Final Screening	
		Relocate Mission	
		Final Sale Conveyance	
	Operating Local, State, Federal Meeting		X
	on Community Base Reuse Plan		
<u>Community Actions</u>			
Organize			
Base Reuse Plan			
Local Zoning			
Capital Facility Plan			
Market Property			
Arrange Financing Grants			
Interim Use			
		Make Purchase	
			X

Planning

The planning process is a complex undertaking that includes assessing the redevelopment potential of the base in the context of ongoing development (community and economic) and integrating the base with the community. This is an immense task that must be undertaken within a short time period. The planning challenge requires a rigorous approach, that starts with overall community goals and ends in the implementation of a plan broadly conceived, finely honed and supported by consensus. The Office of Economic Adjustment has created a diagram that is typical of the planning process in a sequential basis.

Goal Formulation The first step is determination of overall goals and objectives to guide the planning process. These should emanate from the economic adjustment organization established during the organization phase of the adjustment process. The goals for the base are a part of the overall economic recovery strategy developed by the organization. This strategy helps restore the private sector confidence and promises renewed business investment.

Usually the major goal is job creation. Others might include economic viability of redevelopment, tax base expansion, diversification of the local economy, maintenance of a certain environmental quality, meeting affordable housing needs, or to create a certain redevelopment theme.

Objectives The planning process also needs more specific site development objectives to guide planning. These usually include:

- *Replacement of civilian jobs lost;*
- *Public use of portions of the site;*
- *Highest and best use of land and facilities;*
- *Phased development to meet short term goals, but not preclude long term goals;*
- *Expanded site access via roads, rail and water;*
- *High quality appearance;*
- *Compatibility with existing and planned off-site development;*
- *Image change from military to civilian; and*
- *Minimum public cost*

Analysis

Once the guiding goals and objectives have been adopted, considerable baseline data collection and contextual analysis needs to be completed that will allow the rational development and evaluation of feasible reuse alternatives for the base. Engineering drawings and information on the base operations are a crucial source of information. This is available from the base engineer. Unique buildings, physical features, or other major assets should be identified, as they may provide a marketing theme for the converted base.

Redevelopment might fit neatly into an existing economic development strategy for the area, however, it is more likely that the base and its buildings bring a new competitive element to the area, a new marketing angle. This requires a fresh look at area development assets, analysis of feasible business opportunities, and a revision of the strategy. The competitive niche must be identified.

Each base has some unique facilities or capacities that expand local economic development horizons. In all places it is critical that community leaders have vision when they plan for redevelopment of the base.

Uses

The experience of over 100 communities that have successfully converted former military bases to productive civilian uses shows many common uses:

- *Industrial and office parks are located on more than 75 bases;*
- *Educational institutions are on 57 bases;*
- *Public airports are located on 42 bases;*
- *Public recreation facilities are located on 27 bases; and*
- *Health related activities are on 19 bases*

Potential and private uses are as broad as the imagination, practicality and feasibility permit. Typical categories include: aviation, commerce, industry, education, health, recreation, prisons, housing, and public administration. Facility surveys and market analysis will reveal which uses are possible. Public input through the subcommittee structure of the economic adjustment organization will also help to identify potential public and private uses.

Alternatives

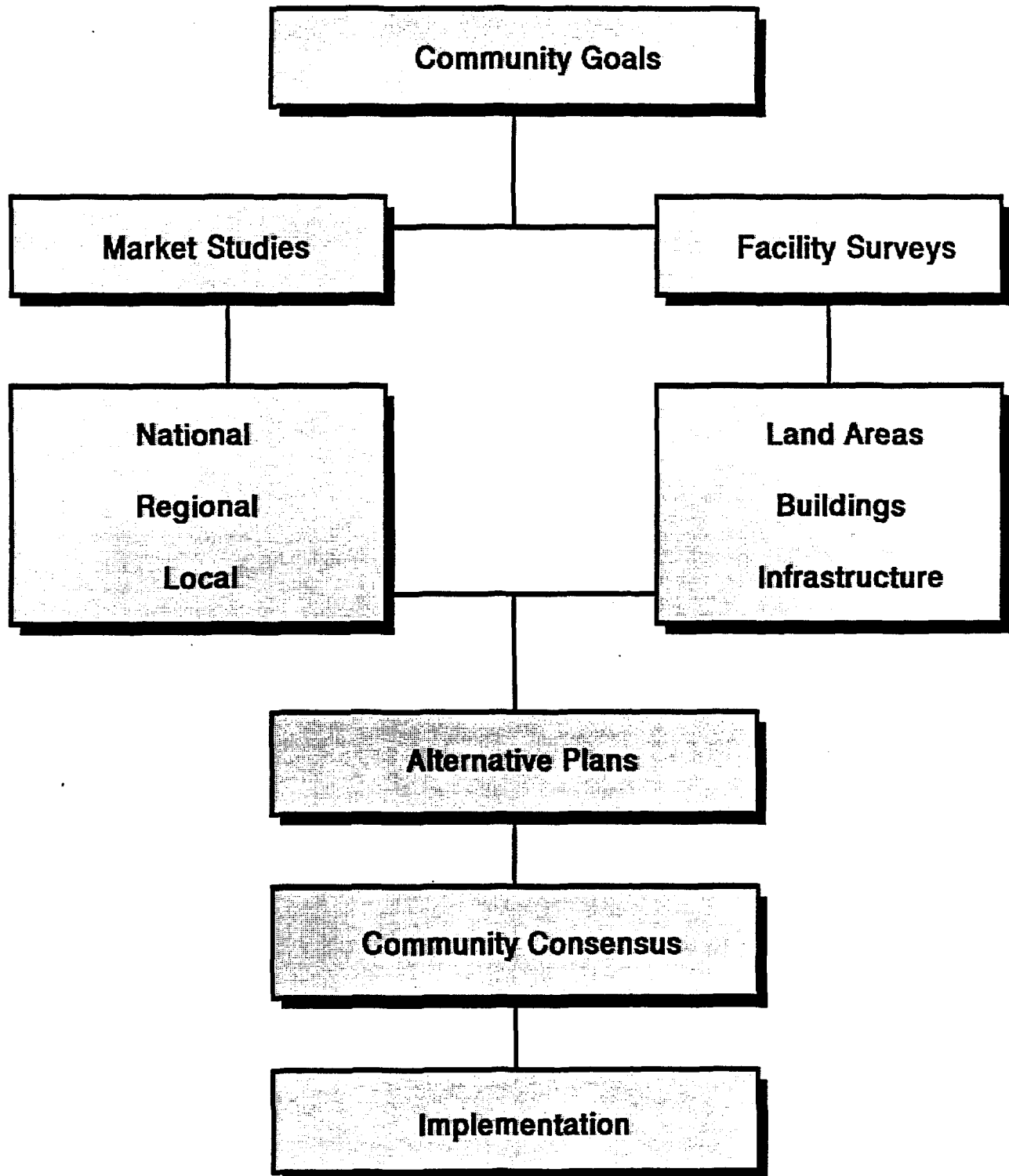
A range of feasible, alternative concepts should be developed and evaluated, using the goals and objectives as a measurement. Throughout the development and analysis of alternatives, public participation is essential to help arrive at consensus on the development concept.

An important ingredient to this part of the planning process is knowledge of land acquisition choices. If one of the major objectives is to minimize public costs, a balance of public benefit (no cost) acquisition and private sector redevelopment is a wise pursuit. Public or nonprofit use of portions of the base for aviation, education, recreation, wildlife conservation, and health purposes are generally at no cost. However, there will be public costs to redevelop and operate these facilities, with little or no tax revenue generated. Also, public benefit uses have "strings" attached. They must continue to be used for these public purposes, constraining long-range development flexibility.

Detailed Plans

After a consensus is reached in the overall development plan, and the federal disposal agent (either the department of Defense or General Services Administration) agrees with the acquisition proposals to implement the plan, work can begin on the details of the site layout, parcelization, phased redevelopment, design controls, and property management considerations. It will be important to establish the new civilian look for the base early in the conversion process. This may include the creation of a new entrance, demolition of obsolete buildings or structures and landscaping to achieve the desired image. Local comprehensive plans and zoning must be updated and adopted to reflect the reuse plan. It is imperative that these decisions be made before the disposal of property by the Federal Government, particularly those portions of the base that will be purchased by the private sector.

REUSE PLANNING PROCESS DIAGRAM



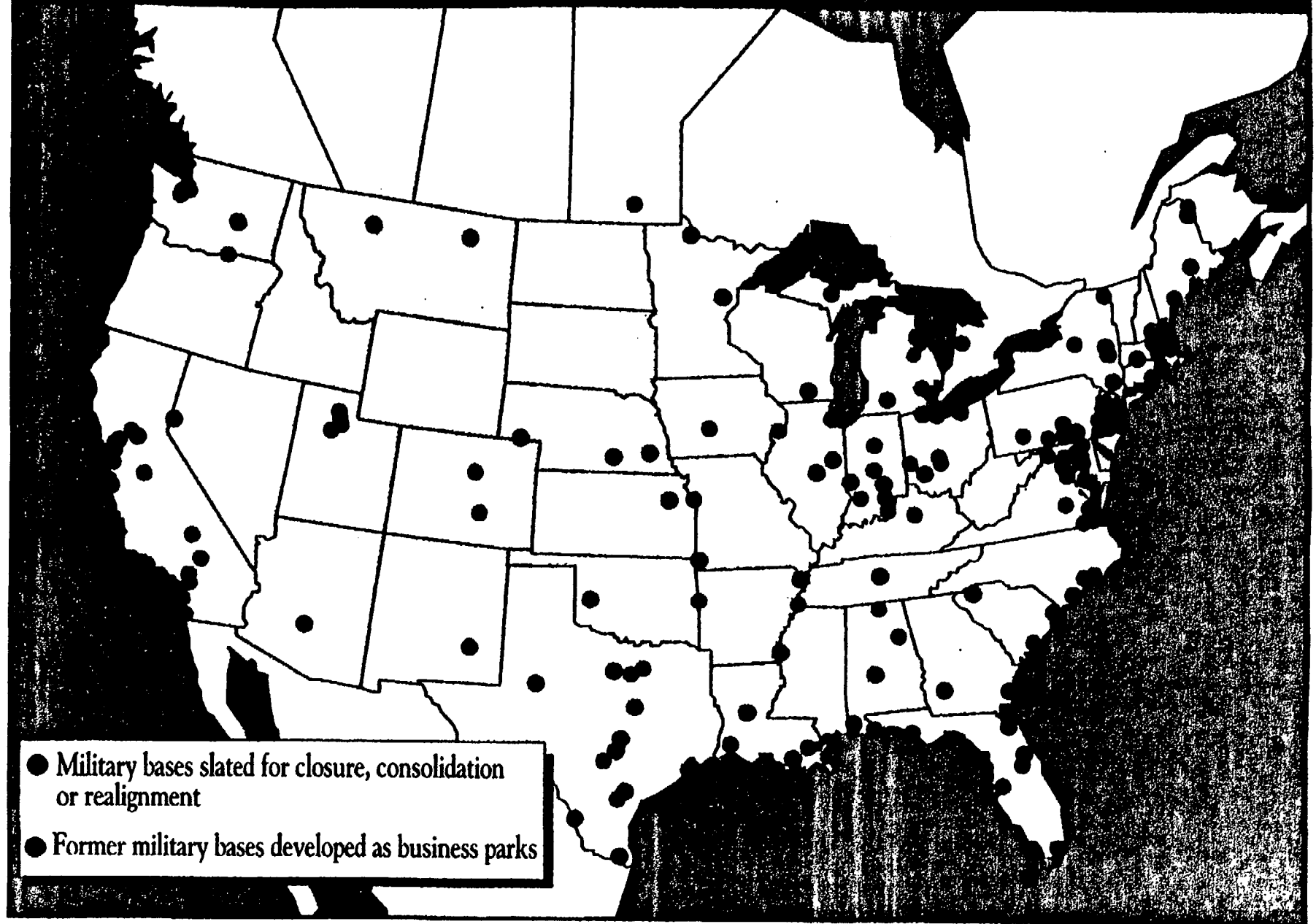
Summary of Completed Military Base Economic Adjustment Projects - 1961 to 1990

The best indicator of the past can many times be determined by the events of the past. As mentioned previously on page 4-7, the OEA has compiled a history of over 29 years of Military Base Reuse to identify military and civilian job losses, the replacement of civilian jobs and the principal industrial/commercial public reuse activities as well as the industrial contacts who were involved with each of the respective reuse activities. The attached graphic illustration indicates the location of each of the bases in the United States.

Many of the activities that occurred (and still occurring) can be looked at as a guideline to the development opportunities available in the Charleston region. Of particular note is the concentration of economic development activity that is synergized by the inherent strengths of either the particular community impacted or that of the manpower skills, infrastructure or other remaining activities as a result of the military installation itself. A typical example, though in the opinion of the consultant very much under utilized, is Donaldson Air Force Base in Greenville, South Carolina. The sheer size of the airport taxiway was instrumental in inducing Lockheed to maintain a presence there. In addition, as a general aviation center, the facility has the capability to land virtually any size cargo plane for logistics support. Magna International, a metal stamping parts supplier to BMW, though not attracted by any particular attribute of the base itself, will act as a catalyst for future development for the Air Park.

In a similar fashion, Charleston has several major inherent advantages as a result of the urban concentration, natural harbor orientation and other important advantages that should be considered. The following are examples of uses that could be instrumental in the future development of the base.

Former Military Base Sites in North America



Summary of Completed Military Base Economic Adjustment Projects 1961-1990

April-June 1990

Community & Location	Year Impact/Year Acquisition	Civilian Jobs Lost (Military Transfers)	New Jobs on Base	Major Firms/Activities	College Vo-Tech Students	Community Contact
Coden, AL Dauphin Island Air Force Station	1971/1972	26/(112)	45	Marine Environmental Science Consortium	167(C) 16,000(S)	Dr. George F. Crozier, Director, Marine Environmental Science Consortium, P.O. Box 369-370, Dauphin Island, AL 36528 (205) 861-3702
Mobile, AL Brookley AFB and Mobile Air Material Area	1965-69/1969	12,300/(1,070)	3,000	Teledyne-Continental Motors International Paper, International Systems, University of South Alabama, Mobile Airport Authority	1,400(c) 20,000(T)	Larry Cook, Manager, Mobile Aerospace Industrial Complex, 1891 9th Street, Mobile AL 35516 (205) 438-7334
Mobile, AL Theodore Army Terminal	1965/1956	14/-	1,550	Degussa-Alabama Inc, Kerr-McGee, Linde, Ideal Basic Industries, Mobile Paint Mfg Co, Huls, Taylor Wharton, Ultraform		Jay Garner, Mobile Alabama Chamber of Commerce, P.O. Box 2187, Mobile, AL 36652 (205) 433-6951
Selma, AL Craig Air Force Base	1997/1978	547/(1,863)	390	Superwood Inc, Tri Tech Services, Beech Aero Spares Services Inc., American Candy Co, Alabama State Trooper Academy, George Wallace Community College, Municipal Airport	100(c) 500(t)	Hugh Allen, Executive Director, Craig Field Airport and Industrial Authority, P.O. Box 1421, Selma, AL 36701 (205) 874-7419
Thomasville, AL Thomasville Air Force Station	1970/1971	18/(110)	200	Thomasville Adult Adjustment Center		Dr. Parker Edwards, Director, Thomasville Adult Adjustment Center, P.O. Box 309, Thomasville, AL (205) 636-5421

Community & Location	Year Impact/Year Acquisition	Civilian Jobs Lost (Military Transfers)	New Jobs on Base	Major Firms/Activities	College Vo-Tech Students	Community Contact
Kenai, AK Wildwood Air Force Station	1972/1974	63/(380)	116	Kenai Native Association Inc, Wildwood Correctional Center, Elderly Housing Center		Willa Konte, General Manager, Kenai Native Association, Suite 203, 215 Fidalgo, Kenai, AK 99611 (707) 746-4215
Benecia, CA Benecia Arsenal	1964/1965	2,321/(32)	5,700	Exxon, Institutional & Financial Services, Unysis Corp, Universal Engr Corp, Corey Construction Co, Lathrop Construction Inc, Sperry Mgt Sys, Huntway Refinery, Ace Hardware		Karen O'Dowd, Economic Development Coordinator with the City of Benecia, 250 East L Street, Benecia, CA 94510 (907) 283-4851
Los Angeles, CA Fort McArthur (a)	1974/1975	1,306/(750)	685	Los Angeles Unified School District, City Rec & Park Dept, Cabrilla Marina, San Pedro-Wilmington Skill Center, CA Conservation Corp San Pedro District, Los Angeles Harbor Dept.		John Keith, Principle, San Pedro-Wilmington Skill Center, 920 W. 36th. Street, San Pedro CA 90731 (213) 831-0295
Malibu, CA Nike Site 78	1974/1974	-(142)	40	Los Angeles County & Fire Paramedic Center		John Haggemiller, Assistant Chief Forrester. Los Angeles County Fire Department, 1320 N. Eastern Avenue, Los Angeles, CA 90063 (213) 267-2481
Palmdale, CA Nike Site 04	1974/1976	-(142)	100	Los Angeles County Fire Center & Correctional Facility		John Haggemiller, Assistant Chief Forrester. Los Angeles County Fire Department, 1320 N. Eastern Avenue, Los Angeles, CA 90063 (213) 267-2481

Community & Location	Year Impact/Year Acquisition	Civilian Jobs Lost (Military Transfers)	New Jobs on Base	Major Firms/Activities	College Vo-Tech Students	Community Contact
Rancho Palos Verdes, CA Nike Site 55	1974/1974	-(91)	60	City Offices, Dimensional Cable		Bill Cornett, City Manager, 30940 Hawthorne Blvd, Rancho Palos Verdes, CA 90274 (213) 377-0360
Torrance, CA Torrance Annex, Long Beach Naval Supply Center	1973/1974	50/-	6	City of Torrance Park Facilities		Gene Barnett, Parks and Recreation Dept, City of Torrance, 3031 Torrance Blvd, Torrance, CA 90503 (213) 618-2930
Ventura County, CA Oxnard Air Force Base	1970/1976	293/(1,215)	1,300	Ventura County Community College, Intersystems, George Bannister Co, US Navy, Oxnard High School District, Camerillo Airport, FAA, Numerous County Agencies	210(C) 840(S) 210(T)	James O'Neill, Airport Administrator, 295 Durley Avenue, Camarillo, CA 93010 (805) 388-4202
Colorado Springs, CO Ent Air Force Base	1971/1976-80	-	280	United States Olympic Committee Hqtrs, USOC Olympic Training Center, Hqtrs-National Governing Body for 16 Sports		Ronald Rowan, General Counsel, United States Olympic Committee, 1750 East Boulder St, Colorado Springs, CO 80919 (719) 632-5551
Green Cove Springs, FL Atlantic Fleet Site	1962/1964	324/(1,281)	650	Kelsey-Hayes, Kuston Karr, Sun State Marine, Price Brothers, Composite Pipe, Willis Barge, Pegasus Technologies, Great Lakes Dredge & Docks		Ed Stewart, Manager, Clay County Port Inc, P.O. Box 477, Green Cove Springs, FL 32043 (904) 284-3676

Community & Location	Year Impact/Year Acquisition	Civilian Jobs Lost (Military Transfers)	New Jobs on Base	Major Firms/Activities	College Vo-Tech Students	Community Contact
Key West, FL Truman Annex(c)	1973/1986	568/(3,356)	60	Hotel, Marina, Historic and Residential Development		Pete Mayer, Vice President, Director of Development, 203 Front Street, Truman Annex, Key West, FL 33040 (305) 296-5601
Orlando, FL McCoy Air Force Base	174/1975	395/(2,812)	6,000	US Postal Service, Paige Avjet, Federal Express, UPS, Emery, D.H.L., Airborne Express, Florida Southern College, Municipal Airport	600(C)	Boe Barrett, Government Services, Greater Orlando Aviation Authority, P.O. Box 620004, Orlando, FL 32862 (407) 826-2496
Sanford, FL Sanford Naval Air Station	1968/1969	230/646)	1,400	Cobia Boats, Hardie Irrigation, Scottys, Lowe's, Florida Gas & Training Center, Central Florida Regional Airport, Codiso	975(T)	Stephen Cook, Director, Sanford Airport Authority, P.O. Box 818, Sanford, FL 32771 (407) 322-7771
Albany, GA Albany Naval Air Station	1974/1978	341/(3,217)	2,000	Miller Brewery, Kroger Peanut Butter, Jobs Corps	1,200(t)	C. Lamar Clinton, Senior Vice President for Economic Development, First State Bank & Trust Company, P.O. Box 8, Albany, GA, 31703 (912) 432-8430
Brunswick, GA Glynco Naval Air Station	1974/1976	344/(1,826)	2,500	Hyster, TPI International Airways, Insteel Construction, Systems Inc, Interior Products, Map International, Sossner Tap & Tool, Federal Law Enforcement Training, Municipal Airport	400(C) 30,000(T)	Randal Morris, Executive Director, Brunswick & Glynn County Development Authority, P.O. Box 10790, Brunswick, GA 31521 (912) 265-2070

Community & Location	Year Impact/Year Acquisition	Civilian Jobs Lost (Military Transfers)	New Jobs on Base	Major Firms/Activities	College Vo-Tech Students	Community Contact
Decatur, IL Decatur Army Signal Depot	1962/1963	1,310/(27)	1,944	Bridgestone/Firestone Inc		D.R. Sullivan, Plant Controller, P.O. Box 1320, Decatur, IL 62525 (217) 425-1231
Forest Park, IL Forest Park Naval Ordnance Plant	1971/1973	1,600/(6)	2,400	Regional Shopping Mall, US Postal Service Bulk Mail Center, Postal Bag Repair		Marlene Quandt, Village Clerk, Forrest Park, IL 60130 (708) 366-2323
Columbus, IN Bakalar Air Force Base	1970/1972	318/(61)	491	Cummins Engine, Indiana University, Purdue University, Rhoades Aviation, Flambeau, Indiana Vo-Tech, Municipal Airport	1,878(C)	Wendall Ross, Manager, Columbus Airport, Columbus, IN 47807 (812) 376-2519
Terre Haute, IN Defense Industrial Plant Equipment Center	1966/1967	253/-	1,100	Accurate Glass Inc, Allstate Mfg Co Inc, Amacet Corp, CBS/Sony Music Club, Xon-way Central Express, Digital Audio Disc Club, Distributors Terminal Corp, Eldred Van & Storage Inc, Ivy Hill Packaging, Jadcore Inc, Miller Business Forms		Phil Kesner, Redevelopment Specialist, Department of Redevelopment, 301 City Hall, Terre Haute, IN 47807 (812) 232-0018
Salina, KS Schilling Air Force Base	1965/1966	326/(4,710)	4,200	Beech Aircraft, Tony's Pizza Inc, Kansas State College of Technology, Salina Area Vo-tech, SP Plastics, Kansas Color Corp, Scientific Engineering, Municipal Airport	735(C) 410(S)	Tim Rogers, Executive Vice President, Salina Airport Authority, Salina, KS 67401 (913) 827-3914

Community & Location	Year Impact/Year Acquisition	Civilian Jobs Lost (Military Transfers)	New Jobs on Base	Major Firms/Activities	College Vo-Tech Students	Community Contact
Topeka, KS Forbes Air Force Base	1973/1976	416/(3,739)	1,600	Forbes Industrial Park, State Dept of Corrections, Lario Enterprises, State Health Dept, Municipal Airport, National Guard.		Dennis Brock, Airport Authority, P.O. Box 19053, Topeka, KS 66619 (913) 862-2362
Houma, LA Houma Air Force Station	1972/1972	18/(112)	1,000	Terrebonne Parrish Vo- Tech, Terrebonne Assoc for Retarded Citizens, Kentwood Water, Texaco Inc, Air Logistics, ERA Helicopters, Houma Municipal Airport	820(S)	Mel Mallory, Airport Manager, Houma- Terrebonne Airport Commission, Station 1, P.O. Box 10158, Houma, LA 70363 (504) 872-4646
Lake Charles, LA Chennault Air Force Base	1963/1964	252/(3,030)	4,000	Chennault Industrial Airpark Authority, Boeing Louisiana, Elsinore Aerospace, Sowella Technical Institute	2,950(C) 35(S) 450(T)	Ernst Broussard, Director, Planning & Development, P.O. Box 900, Lake Charles, LA 70602 (318) 491-1210
New Iberia New Iberia Naval Air Station	1965/1966	85/(1,025)	1,220	Air Logistics, Univ of SW Louisiana Research Center, Teche Area Vo- Tech, Hulhnance Drill Co, Carorundum, Loffland Bros, ERA Helicopters, Otis Engr Corp, Pelican Aviation Corp, Acadania Criminalistic Lab	350(S)	Rick H. Lasserre, Iberia Parish Airport Authority, 510 Avenue C, Suite A, New Iberia, LA 70560 (318) 365-7202

Community & Location	Year Impact/Year Acquisition	Civilian Jobs Lost (Military Transfers)	New Jobs on Base	Major Firms/Activities	College Vo-Tech Students	Community Contact
Bangor, ME Dow Air Force Base	1968/1968	342/(5,479)	2,500	General Electric, Anzac Electronics, Hqtrs Bar Harbor Airways Inc, US Air Force, University of Maine, State Dept of Human Services, Municipal Airport, Timberland Footware	2,000(C)	Donald Bugginton, Director Economic Development, City of Bangor, Bangor ME 04401 (201) 945-4400
Charleston, ME Charleston Air Force Station	1979/1981	23/(169)	97	Charleston Correctional Facility	150(T)	Jeffrey Merrill, Director, Charleston Correctional Facility, RR#1, Box 1400, Charleston, ME 04422 (207) 285-3307
Presque Isle, ME Presque Isle Air Force Base	1961/1962	268/(1,259)	1,250	Biner Brothers, Indian Head Plywood, Wetterau Inc, Northern Maine Technical College, Northern Maine Regional Airport	540(C)	Larry E. Clark, Executive Director, Presque Isle Industrial Council, P.O. Box 831, Presque Isle, ME 14769 (207) 764-4485
Baltimore, MD Fort Haolabird	1973/1977	2,805/(1,335)	1,800	Holabird Industrial Park, Universal Foods, Thrashers Furniture, Clean Air Inc, PPG, Riparus Corp, Gascoyne Lab, HS Processing, John D Lucas Printing Co		Larisa Salamacha, Project Director, Baltimore Economic Development Corp, 36 South Charles Street, Suite 1600, Baltimore, MD 21201 (301) 837-9305

Community & Location	Year Impact/Year Acquisition	Civilian Jobs Lost (Military Transfers)	New Jobs on Base	Major Firms/Activities	College Vo-Tech Students	Community Contact
Boston, MA Boston Army Base/Navy Annex	1794-81/1977-83	(b)	3,600	Marine Industrial Park, Boston Design Center, Coastal Cement Corp, AuBon Pain, General Ship Corp, Emery World Wide, Mass Bay Brewery, First Trade Union Saving Bank, Boston Tech Center, Stavis Seafood	100(T)	Donald A. Gillis, Executive Director, Economic Development and Industrial Corp of Boston, 9th Floor, 39 Chauncy Street, Boston, MA 02111 (617) 725-3342
Boston, MA Boston Shipyard-Charlestown(c)	1974/1979	5,552/(553)	3,700	Boston Redevelopment Authority, Immobiliare Ltd, Boston National Historic Park, Sail Maine, MA General Hospital, MA Water Resource Authority, Commercial-Office Residential Complex		Bob Rush, Deputy Director, Harbor Planning & Development and John O'Brien, Navy Yard Project manager, 22 3rd Ave, Charlestown Navy Yard, Charlestown, MA 02129 (617) 722-4300
Chelsea, MA Chelsea Naval Hospital(d)	1974/1979	326/(462)	130	Boston Architectural Team, DMC Energy Inc, First New England Consortium, Admiral's Hill Development, Marina		Robert Luongo, Director, Community Development, City Hall, Chelsea, MA 02150 (617) 889-0700
Chicopee, MA Westover Air Force Base	1974/1977	+150(h)/(4,014)	2,900	Massachusetts Municipal Electric Co, Procter & Gamble, Ludlow Technical Papers, Dennison Mfg Corp, Emery World Wide		Alan W. Blair, President, Westover Metropolitan Development Corp, 3911 Pendleton Ave, Chicopee, MA 01022 (413) 593-6421

Community & Location	Year Impact/Year Acquisition	Civilian Jobs Lost (Military Transfers)	New Jobs on Base	Major Firms/Activities	College Vo-Tech Students	Community Contact
Springfield, MA Springfield Arsenal	1968/1968	2,400/(20)	3,250	Digital Equipment Corp, Smith & Wesson, Hano Business Forms, Springfield Technical Community College, Springfield Armory National Historic Site	7,000(C)	Marc Hanks, Managing Partner with Economic Development Partners, Bank of Boston Building, 1350 Main Street, Springfield, MA 01103 (413) 787-1542
Watertown, MA Watertown Arsenal	1967/1968	2,306/(17)	1,360	Arsenal Mall, Lifeline Systems Inc, Arsenal Apartments, Howard Community Health Plan, Arsenal Park		Mark Boyle, Director, Planning & Community Development, Town of Watertown, 149 Main Street, Watertown, MA 02172 (617) 972-6417
Saulte Ste Marie, MI Kincheloe Air Force Base	1977/1978	737/(3,074)	2,144	Five different correctional facilities, Chippewa County International Airport, Olofson Fabrication Services Inc, Fabricor Inc, Eclipse Inc, American Kimross Corp		Kathy Noel, Executive Vice President, Chippewa County Economic Development Corp, 119 Culley, Kincheloe, MI 49788 (906) 495-5631
Baudette, MN Baudette Air Force Station	1979/1981	30/(100)	25	Rapid River Grain & Feed Company		Larry Larson, President, Rapid River Grain & Feed Inc, P.O. Box 458, Baudette, MN 56623 (218) 634-2041
Duluth, MN Duluth Air Force Base	1982/1984	446/(1,040)	200	Duluth Prison Camp, Natural Resources Research Institute, st Louis County & Land Dept, Planing Specialties, Minnesota Rust Proofing		John Grinden, Executive Director, Duluth Airport Authority, Duluth, MN 55811 (218) 727-2968

Community & Location	Year Impact/Year Acquisition	Civilian Jobs Lost (Military Transfers)	New Jobs on Base	Major Firms/Activities	College Vo-Tech Students	Community Contact
Wadena, MN Wadena Air Force Station	1971/1973	15/(130)	30	Bell Hill Recovery Center		Audrey Schmitz, Bell Hill Recovery Center, P.O. Box 206, Wadena, MN 54682 (218) 631-3610
Greenville, MS Greenville Air Force Base	1965/1966	242/(2,048)	325	Southern Fasteners, Delta Aircraft Painting, AGAC, Head Start Schools, Drug & Alcohol Center, Homeless Shelters, Municipal Airport		Wayne Downing, Airport Director, Greenville Municipal Airport, Greenville, MS 38701 (601) 334-3121
Kansas City, MO Richards-GeBaur Air Force Base	1977/1985	1,500/(2,400)	475	BTM Inc, Calvary Bible College, Electronic Institute, Southwest Tracor, US Air Force, Marine Corps Support Facility, Directorate of Financial Operations, Richards-GeBaur Airport	510(C)	James Gerner, Assistant Director, General Aviation Airport, 414 East 12th Street, 9th Floor, City Hall, Kansas City, MO 64106 (816) 274-2300
Neosho, MO Camp Crowder & Air Force Plant 65	1970/1968-75	1,200/-	3,500	Teledyne, Lazy Boy Char Co, Talbot Wire, Crowder Industry, Moark Production, Crowder College, Municipal Airport	1,500(C)	Gib Garrow, Executive Vice President, Neosho Chamber of Commerce, Neosho, MO 64850 (417) 451-1925
Conrad, MT Anti-Ballistic Missile Site	1972/1975	153/(20)	50	Cascade Campers Ltd, Intercontinental Truck Body, MK Distributors, Tiber Water Authority		Darrel Brown, Treasurer, Pondera County Economic Development Corp, Conrad, MT 59425 (406) 278-7525
Lewistown, MT Lewistown Air Force Base	1971/1794	27/(163)	3	e		William Spoja, Former County Attorney, Lewistown, MT 59457 (406) 538-8767

Community & Location	Year Impact/Year Acquisition	Civilian Jobs Lost (Military Transfers)	New Jobs on Base	Major Firms/Activities	College Vo-Tech Students	Community Contact
Hastings, NE Hastings Naval Ammunition Depot	1966/1966	240/(10)	1,650	Hastings Industries, TL Irrigation, Ebko Industries, Animal Research Center, Hastings Park, Good Sumaritan Retirement Center, Central Nebraska Community College, Hastings Energy Center	3,000(C)	Dee Hausler, Chamber of Commerce, P.O. Box 1104, Hastings, NE 68901 (402) 462-4159
Lincoln, NE Lincoln Air Force Base	1966/1966	396/(6,383)	3,000	Goodyear Tire, Bruswick Corp, Tri-Con Industries, Land & Sky Inc, Yasufuku Inc, Heinke Technology, Boomers Printers, Valentino's Inc, Dept of Corrections Minimum Security, Municipal Airport		Wayne Andersen, Executive Director, Lincoln Airport Authority, P.O. Box 80407, Lincoln, NE 98501 (402) 474-2770
Omaha, NE	1975/1976	49/(56)	228	Metropolitan Community College	6,500(C)	John Weber, Metropolitan Community College, P.O. Box 377, Omaha, NE 68103 (402) 449-8425
Sidney, NE Sioux Army Depot	1967/1967	585/(2)	650	Sidney Warehousing Activities, Western Nebraska Community College, Glover Group, Cabela's Mail Order, Scoular Grain Co, Western Stockman Inc	300(C)	Anita Pennel, Chamber of Commerce, Sidney, NE 69162 (308) 254-5851

Community & Location	Year Impact/Year Acquisition	Civilian Jobs Lost (Military Transfers)	New Jobs on Base	Major Firms/Activities	College Vo-Tech Students	Community Contact
Reno, NV Stead Air Force Base	1966/1969	519/(2,133)	2,000	JC Penny Dist. Cntr, Precision Roll Products, Univ of NV Desert Research Institute, R. Donelly Son's Bradford White West, Daimler Benz Freight Liner, Hidden Valley Ranch Food Products, Municipal Airport	1,200(c)	Robert Schriver, Associate Director, Economic Development Authority of Western Nevada, 5190 Neil Rd, Suite 111, Reno, NV 89502 (702) 829-3700
Manchester, NH Grenier Air Force Base	1966/1966-75	138/(320)	3,200	Sanders Associates, Disogrin Industries, Summit Packaging, Armtec Industries, Municipal Airport		Jane Hills, Business Development Representative, Greater Manchester Development Corp, 889 Elm Street, Manchester, NH 03101 (603) 624-6505
Burlington, NJ Burlington Army Ammunition Plant	1973/1977	520/(10)	500	Duplifax, Resource Equity Developers, Kitchens, Inc, Able Warehousing, Joint Burlingtons Economic Development Corp		Mayor Herman Costello, City Hall, Burlington, NJ 08016 (609) 386-0200
Edison, NJ Camp Kilmer	1963/1965	578/(426)	3,800	Livingston College of Campus of Rutgers University, Kaiser Aluminum, Revlon, Continental Can, Spaulding, Mattell Toys, Job Corps, Middlesex Vo-Tech Scholl, Lightolier Co	3,500(C) 1,050(S) 463(T)	Barry Larson, Business Administrator, Edison Township, 100 Municipal Blvd, Edison, NJ 08817 (201) 287-0900

Community & Location	Year Impact/Year Acquisition	Civilian Jobs Lost (Military Transfers)	New Jobs on Base	Major Firms/Activities	College Vo-Tech Students	Community Contact
Edison, NJ Raritan Arsenal	1964/1964-65	2,610/(8)	13,100	RCE, American Hospital Supply, R.H. Macy, Singer, B.F. Goodrich, Nestle, GSA Depot, United Parcel Service, Lloyd American Electronics, Grant Liquor, Michelin Tires, Kirsch Co, Ramada and Holiday Inns, Middlesex Community College, American Can	4,088(C)	Peter Cook, Managing Principal, Summit Associates Inc, Raritan Plaza II, Edison, NJ 08818 (201) 287-0900
Lumberton, NJ Nike Site 25	1974/1976	94/-	75	Lumberton Township Municipal Offices, Midway School for Learning Disabilities		Patricia Ranier, Clerk, Lumberton Township, P.O. Box 1860, Lumberton, NJ 08048 (609) 267-3217
Roswell, NM Walker Air Force Base	1967/1967	379/(4,900)	3,000	Transportation, Mfg Corp, Levi Strauss, Job Corps, Christmas by Kreb's Co, Eastern NM University, Municipal Airport	1.200(C)	Dennis Ybarra, Roswell Industrial Air Center, P.O. Box 5759, Roswell, NM 88201 (505) 347-2594
Newburgh, NY Stewart Air Force Base	1969/1971	1,011/(2,700)	1,000	United Express, American Airlines, Airborne International, Emery Air Freight, USDA Animal Import Center, New York Dept of Transportation, Air National Guard, General Aviation Airport		James P. McGuiness, Airport Director, Stewart International Airport, P.O. Box 6100, Newburgh, NY 12550 (914) 564-2100

Community & Location	Year Impact/Year Acquisition	Civilian Jobs Lost (Military Transfers)	New Jobs on Base	Major Firms/Activities	College Vo-Tech Students	Community Contact
New York City, NY Army Pictorial Center	1970/1972	388/(38)	1,070	American Museum of Movie Image, Kaufman Astoria Studios		Ralph Blank, American Museum of the Movie Industry, 34-12 36th Street, Astoria, NY 11106 (718) 784-4520
New York City, NY Brooklyn Army Depot	1976/1981	336/(54)	6,700	New York Rail Car Company, SAMCO Inc, Phase II building Project (f)		Debra Alligood, Project Manager, New York City Public Development Corp, 161 William St., New York, NY 10038 (212) 619-5000
New York City, NY St Albans Naval Hospital	1974/1974	386/(517)	865	Veterans Administration Hospital, Roy Wilkins Park		Solomon Goodrich, Executive Director, Southern Queens Park Assn Inc, 119th Ave & Merrick Blvd, Jamaica, NY 11434 (718) 276-4630
Schenectady, NY Schenectady Army Depot	1966/1967	484/(15)	600	General Electric, PADCO Inc, State of New York, Distribution Unlimited, IBM		E. Graham Thompson, Sr Vice President, Northeastern Industrial Park Inc, P.O. Box 98, Guiderland Center, NY 12085 (518) 358-4435
Voorheesville, NY Voorheesville General Depot	1966/1967	1,000/(20)	300	Scott Paper, Proctor & Gamble, Chrysler Car Distribution, Agway Feeds, State of New York		E. Graham Thompson, Sr Vice President, Northeastern Industrial Park Inc, P.O. Box 98, Guiderland Center, NY 12085 (518) 358-4435
Watertown, NY Watertown Air Force Station	1979/1981	24/(24)	498	Watertown Correctional Facility		Andrew Peters, Superintendent, Watertown Correctional Facility, Watertown, NY 13601 (315) 782-7490

Community & Location	Year Impact/Year Acquisition	Civilian Jobs Lost (Military Transfers)	New Jobs on Base	Major Firms/Activities	College Vo-Tech Students	Community Contact
Wilmington, NC Air Force Interceptor Squadron	1967/1976	4/(96)	487	US Air, Applied Analytical Industries, Air Wilmington Inc, Signa Tech Inc, NC Army National Guard, FAA Control Tower, Aeronautic Inc, International Airport		Robert Kemp, Airport Director, New Hanover International Airport, 1901 Hall Drive, Suite 201, Wilmington, NC 28405 (919) 341-4333
Bellefontaine, OH Bellefontaine Air Force Station	1969/1970	27/(136)	120	Ohio Hi-Point Joint Vo- Tech School	600(S)	Marilyn Meyer, Superintendent, Ohio Hi- Point Joint Vo-Tech School, RFD-2, Bellefontaine, OH 43311 (513) 599- 3010
Columbus, OH Rickenbacker Air Force Base	1978/1984	380/(1,700)	625	Federal Express, Meisner Electric, Lockheed, Air National Guard, Army Reserve, General Aviation Airport		Rod Borden, Airport Manager, Rickenbacker Port Authority, 109 John Glenn Avenue, Columbus, OH 43217 (614) 491-1401
Port Clinton, OH Erie Ordnance Depot	1966/1967	1,885/(85)	1,200	AIM Packaging, Ares Inc, USCO Dist Services Inc, Scandura, Superior Mfg, P&T Products, Challenger Motor Freight, Uniroyal Engineered Products, Toledo Edison Co, Panelite		Jeff Crosby, Manager, Erie Industrial Park, Port Clinton, OH 43452 (419) 635-4051

Community & Location	Year Impact/Year Acquisition	Civilian Jobs Lost (Military Transfers)	New Jobs on Base	Major Firms/Activities	College Vo-Tech Students	Community Contact
Toledo, OH Rossford Arsenal	1963/1965	1,654/(52)	3,900	Toledo Mold, Temp Glass, Glass Tech Inc, Ace Hardware Dist Cntr, JC Baxter Tub Co, Surface Combustion, Toyota Redistribution Center, Michael J. Owens Tech College, Penta County Vocational School	4,570(C) 1,400(S)	Susan Webb, President, Ampoint, P.O. Box 911, Toledo, OH 43692 (419) 666- 3222
Wilmington, OH Clinton County Air Force Base	1971/1973	613/(66)	4,000)	Airborne Express, UNISETS, Ferno Washington Inc, Laurel Oaks Vo-Tech, Industrial Park, Hydro- Lift Trucks, Southern State Community College, Electric Supply Company	800(C) 500(S)	Cynthia Hill, Executive Director, Wilmington Chamber of Commerce, 69 North Street, Wilmington Oh 45177 (513) 382-2737
Burns Flat, OK Clinton-Sherman Air Force Base	1969-70/1970	381/(1,700)	400	Wagnor Electric, Halivurton Services, Jamesville Products, Western Oklahoma VoTech Center, Western Fabricators Co, Clinton- Sherman, Municipal Airport	450(C)	Mark McAtee, Manager, Clinton- Sherman Industrial Airport, P.O. Box 100, Burns Flat, OK 73624 (405) 562-4526

Community & Location	Year Impact/Year Acquisition	Civilian Jobs Lost (Military Transfers)	New Jobs on Base	Major Firms/Activities	College Vo-Tech Students	Community Contact
Corvallis, OR Adair Air Force Station	1969/1973	180/(864)	105	Oregon, SouthWest Washington, Utah & Southern Idaho Laborers Training Trust, Oregon Fish & Wildlife Service, Santiam High School, Adair Village Housing, Willamette Carpenters Training	150(S) 45(T)	Bill Duke, Director of Training, Oregon, SW Washington, Utah & Southern Idaho, Laborers Training Trust, RT 5, Box 325A, Corvallis, OR 97330 (503) 745-5513
Harrisburg, PA Olmsted AFB and Middletown Air Material Area	1965-68/1969	10,050/(1,250)	2,800	Pennsylvania State University-Capital Campus, Penn State Dept of Transportation, National Guard, Municipal Airport	2,640(C)	Matthew Douglas, President, Capital Chamber of Commerce, P.O. Box 969, Harrisburg, PA 17108 (717) 232-4121
Lancaster, PA Marrietta Air Force Base	1967/1968	750/-	636	Armstrong World Industries		Eugene Moore, Director of Public Relations, Armstrong World Industries Inc, P.O. Box 30001, Lancaster, PA 17604 (717) 396-2101
Philadelphia, PA Franford Arsenal	1977/1983	3,400/(17)	2,000	Grafic Reproduction Services, Webster, Spring Co, Philadelphia Biologics, Gordon-Breach Inc, Mechanical Specialties Inc		Mark Hankin, President, Hankin Management Co, P.O. Box 26767, Elkins Park, PA 19117 (215) 674-9660
Pheonixville, PA Valley Force Army Hospital	1973-74/1978	845/(546)	50	Valley Force Christian College	200(C)	Daniel Baer P.O. Box Pheonixville, PA 19460 (215) 933-7725
York, PA York Naval Ordnance Plant	1964/1964	1,092/(13)	1,600	Harley Davidson Inc		Frank Caster, Director of Human Resources, Harley Davidson Inc, York, PA 17402 (717) 848-1177

Community & Location	Year Impact/Year Acquisition	Civilian Jobs Lost (Military Transfers)	New Jobs on Base	Major Firms/Activities	College Vo-Tech Students	Community Contact
Águadilla, PR Ramey Air Force Base	1973/1977	709/(3,866)	1,500	Dupont Pharmaceutical, Univ of Puerto Rico, Job Corps, Digital Equipment, Hewlett Packard, Municipal Airport	1,000(C)	Jose I. Ortiz, Manager, P.O. Box 20, Ramey, PR 00604 (809) 891-2286
Newport, RI Newport Naval Base	1974/1978	484/(11,069)	2,500	Derecktor Shipyard, Bend Inc, Hughes Aircraft, Avid Corp, Syscon, McLaughlin Research, Raytheon, RCA Services Co		Bob Parsons, Director, Rhode Island Department of Economic Development, Gilbane Bldg, 7 Jackson Walkway, Providence, RI 02903 (401) 277-2601
North Kingston, RI Quonset Point Naval Air Station	1974/1978-80	4,500/(6,211)	7500	Electric Boat Company, Newport Offshore, Cowa Plastics, IMS Inc, Toray Industries, Drew Oil Corp, CSW Transportation, Bristol Bay Seafood, Applied Environmental Technology, General Aviation Airport		Gary Lash, Director, Property Management and Development, Rhode Island Port Authority, 7 Belver Ave, North Kingstown, RI 02852 (401) 277-3134
Greenville, SC Donaldson, Air Force Base	1963/1964	672/(4,100)	5,253	Woolworth Distribution Center, 3M Company, Donaldson Area Vocational Education Center, Lockheed Aero Center, General Electric, Procter & Gamble Inc, Amoco, Auto Zone Inc, Magna International, General Aviation Airport	500(C)	Phillip Southerland, Executive Director, Donaldson Center, Greenville, SC 29605 (803) 277-3152

Community & Location	Year Impact/Year Acquisition	Civilian Jobs Lost (Military Transfers)	New Jobs on Base	Major Firms/Activities	College Vo-Tech Students	Community Contact
Edgemont, SD Black Hills Army Depot	1967/2968	512/12)	4	Grain Storage		Matthew Brown, Former Mayor, Box 629, Edgemont, SD 57735 (605) 662-7720
Smyrna, TN Stewart Air Force Base	1969/1971	470/(4,050)	1,539	Cross Continental Services, Cumberland Mfg Co, Better Built Aluminum Co, Square D Mfg Co, State Rehabilitation Center, Tenn Army National Guard, Corporate Flight Mgt, Independence Air Inc, Smyrna Air Center		Steve Fitzhugh, Building 644, Smyrna, TN 37167 (615) 896-7736
Amarillo, TX Amarillo Air Force Base	1969/1969	1,511/(5,560)	600	Hughes Aviation, Levis Strauss, Tasco Engineering, Texas State Technical Institute, Municipal Airport	795(C) 5,520(T)	Richard McCollum, Airport Manager, Amarillo International Airport, 10801 Airport Blvd, Amarillo, TX 79111 (806) 335-1671
Big Springs, TX Webb Air Force Base	1977/1978	909/(2,204)	575	IBI, Freecom, Fraser Industries, Fiber Flex, Bureau of Prisons, Western Container, Southwest College for the Deaf, Municipal Airport	126(C) 800(T)	Hal Boyd, Manager, Big Spring Airpark, P.O. Box 3190, Big Spring, TX 79721-3190 (915) 263-8311
Harlingen, TX Harlingen Air Force Base	1962/1963-64	720/(3,100)	1,600	Levi Strauss, Texas Steel, Marine Military Academy, Texas State Tech Institute, General Dynamics, Confederate Air Force, Valley International Airport	2,800(C) 400(S)	David Alex, President, Chamber of Commerce, P.O. Box 189, Harlingen TX 78551 (512) 423-5440

Community & Location	Year Impact/Year Acquisition	Civilian Jobs Lost (Military Transfers)	New Jobs on Base	Major Firms/Activities	College Vo-Tech Students	Community Contact
Laredo, TX Laredo Air Force Base	1973/1975	700/(1,998)	2,200	Sancheez O'Brien Co, Webb County Tax Assessor, K-Mart, Tracor Aerospace, Robertshaw Controls, ^So Texas Private Industry Council, Combustion Engineering, Laredo City Offices, Municipal Airport		Humberto Garza, Assistant to Airport Director, Laredo International Airport, 518 Flightline, Bldg 132, Laredo, TX 78041 (512) 423-5440
Mineral Wells, Tx Fort Wolters	1974/1975-77	1,219/(692)	1,683	Perry Equip Co, Optic Technology Corp, Concepts Inc, Antler Antennas, S-Tec, Ford MFG, Western Co of NA, Halburton Resources Mgt, Tejas Home for Youth, Downing Heliport, Butler Ventamatic, Weathford College	400(C)	Greg Harrison, City Manager, P.O. Box 339, Mineral Wells, TX 76067 (817) 328-1211
San Marcos, TX Camp Gary	1963/1965	30/(1)	750	Gary Job Corps Center, Municipal Airport	2,200(T)	Albert Perkins, Director, Job Corps Center, Box 976, San Marcos, TX 78666 (512) 396-6561
Sherman-Denison, TX Perrin Air Force Base	1971/1972	600/(1,930)	437	Denison Industries, Texas Instruments, Greater Texoma Utility Authority, Grayson County College, Local Government Offices, General Aviation Airport	294(C)	Doyle Dobbins, General Manager, Grayson County Airport, 4700 Airport Drive, Denison, TX 75020 (214) 786-2904

Community & Location	Year Impact/Year Acquisition	Civilian Jobs Lost (Military Transfers)	New Jobs on Base	Major Firms/Activities	College Vo-Tech Students	Community Contact
Sweetwater, TX Sweetwater Air Force Base	1971/1971	25/(100)	130	Texas State Technical Institute	650(C)	Robert Musgrove, Dean, Instructional Studies, Texas State Technical Institute, Sweetwater, TX 79556 (915) 235-7300
Waco, TX James Conally Air Force Base	1966/1966	833/(2,980)	2,000	Elsinore Airframe Services Inc, Chrysler Technologies, Airborne Systems Inc, Texas State Technical Institute, General Aviation Airport	4,000(C)	Monica Faulkenbery, Director of Public Information, Texas State Technical Institute, Waco, TX 76705 (817) 867-4887
Moses Lake, WA Larsen Air Force Base	1966/1966	38/(3,947)	900	Northwest Airlines, Japan Airlines, Boeing, Sundstrand Data Control, Big Bend Community College, Columbia Basin Job Corps, Municipal Airport	1,250(C) 200(T)	David M. Bailey, Executive Manager, Port of Moses Lake, Grant County Airport, Moses Lake, WA 98837 (509) 762-5363
Madison, WI Truax Field	1968/1968	378/(2,658)	3,000	Hazelton Laboratories, Badger Display, Madsen Corp, Omni Press, Venetian Marble, Madison Area Technical College, Dane County Regional Airport	6,000(C)	Charles Peterson, Business Manager, Dane County Regional Airport, Madison, WI 53704 (608) 246-3380
Total Civilians	87,557	163,685				
Total Military	136,225					

Source: 1961-1990 Civilian Reuse of Former Military Bases, Office of Economic Adjustment, Department of Defense.

Footnotes: (C) College students or post secondary vocational-technical students

(S) Secondary or high school vocational-technical students

(T) Manpower development and other trainees

* Does not include the Middle Reservation still retained by the DoD.

- ^b Jobs lost are included in the total figures for the Boston Naval Shipyard in Charlestown
- ^c The former Charlestown Shipyard is being converted into a Commercial-Office-Residential complex with an estimated \$1.3 billion in private sector investment to complete the full development.
- ^d The former Naval Hospital was redeveloped as a \$100 million (7.2 million ETAC assistance) "Admiral's Hill" residential-commercial-recreational complex.
- ^e The Sky Bible Institute closed in 1983 due to declining enrollments. The community is now seeking to reuse the site as a Winter resort or youth camp.
- ^f Expected completion will add 4,000 jobs when fully occupied.
- ^g Former installation site is embroiled in environmental problems.
- ^h Loss of 4,400 military and a net gain of 150 for the Air Force Reserve which retained the runway facilities.

Notes: A detailed writeup of approximately 20 communities can be found in a report titled "Community Response to Reduced Defense Activity, Communities in Transition" with reprints available by writing: Chairman-President's Economic Adjustment Committee, Office of the Secretary of Defense: Attention: Director of Economic Adjustment, Pentagon, Washington, D.C., 20301-4000.

INDUSTRIAL RECRUITMENT RESOURCES

Workforce Talent Surplus

The Charleston area has a significantly smaller portion of the economy devoted to manufacturing than the national average. Examination of the table titled "Comparative Analysis by SIC Code" clearly demonstrates that the Charleston economy is nearly 6.0% below the national average. Even more disturbing is the concentration of employment within the manufacturing sector is concentrated in only a few industries. Examination of the table which exhibits employment by manufacturing employment groups as well as the table titled "Major Employers" shows that the areas where employment is most concentrated is textile mill products (SIC 23), paper & allied products (SIC 26), chemicals and allied products (SIC 28) and industrial machinery and equipment (SIC 35).

A major issue concerning the greater Charleston region has been which industries to target for industrial growth and expanded job base opportunities. A recent study by GSO (Growth Strategies Organization) suggests that the following industries are "most desirable and feasible economic development targets for the Charleston area"¹

<u>SIC Code</u>	<u>Industry</u>
283	<i>Drugs</i>
3844-5	<i>Electronics Instruments</i>
286	<i>Industrial Inorganic Chemicals</i>
382	<i>Process Control Instruments</i>
3555	<i>Printing Trades Machinery</i>
3841	<i>Surgical & Medical Instruments</i>
3561	<i>Pumps</i>
3541	<i>Metal Cutting Tools</i>
3554	<i>Paper Industry Machinery</i>
3563	<i>Air and gas Compressors</i>
3542	<i>Metal Forming Tools</i>
3519	<i>Internal Combustion Engines</i>
3569	<i>General Industrial Machinery</i>
2824	<i>Organic Fibers</i>
*	<i>Medical & Biological Research & Development</i>
3556	<i>Food Products Machinery</i>
*	<i>Headquarters, Closely Held Companies</i>
*	<i>Corporate Data Centers</i>
3714	<i>Motor Vehicle Parts</i>
3566	<i>Speed Drives and Gears</i>
3699	<i>Electrical Equipment, nec.</i>
3552	<i>Textile Machinery</i>
3679	<i>Electronic Components, nec.</i>
3851	<i>Ophthalmic Goods</i>
3567	<i>Industrial Furnaces and Ovens</i>
3533	<i>Woodworking Machinery</i>
3675	<i>Electronic Capacitors</i>
3562	<i>Ball and Roller Bearings</i>

Comparative Analysis by SIC Code

	<u>SIC Code</u>	<u>US Economy</u>		<u>Charleston MSA²</u>		<u>Variance¹</u>
		<u>Emp. Totals</u>	<u>Percent</u>	<u>Emp. Totals</u>	<u>Percent</u>	
Agriculture, Forestry & Fishing	07--	543,652	0.6%	2,278	0.4%	-0.2%
Mining	10--	716,859	0.8%	81	1.7%	1.0%
Construction	15--	4,671,221	5.1%	10,478	9.2%	4.2%
Manufacturing	20--	18,383,368	19.9%	20,709	14.1%	-5.8%
Transportation & Public Utilities	40--	5,584,484	6.1%	10,384	8.5%	2.4%
Wholesale Trade	50--	6,218,875	6.7%	6,474	8.1%	1.3%
Retail Trade	52--	19,600,024	21.2%	43,127	18.4%	-2.8%
Finance, Insurance & Real Estate	60--	6,860,177	7.4%	7,926	8.1%	0.6%
Services	70--	29,575,248	32.0%	46,106	31.4%	-0.7%
Unclassified Establishments	99--	147,635	0.2%	159	0.1%	-0.1%
Total	➤	92,301,543	100.0%	147,722	100.0%	

Note: ¹. Variance is the absolute difference between each percentage.

². Source: S.C. Employment and Securities Commission

Comparative Analysis by SIC Code – Manufacturing

<u>Manufacturing Industry Group</u>	<u>Chareston MSA³</u>			<u>US Economy⁴</u>		<u>Variance²</u>
	<u>SIC</u>	<u>Employment</u>	<u>% of Total</u>	<u>(x 1.0 Million)</u> <u>Employment</u>	<u>% of Total</u>	
Food and Kindred Products	20	361	1.7%	1,475,000	8.8%	-7.04%
Tobacco Products	21	N/A	0.0%	40,000	0.2%	-0.24%
Textile Mill Products	22	1,745	8.4%	598,000	3.6%	4.87%
Apparel and other Textile Products	23	761	3.7%	960,000	5.7%	-2.04%
Lumber & Wood Products	24	1,285	6.2%	631,000	3.8%	2.45%
Furniture and Fixtures	25	450	2.2%	466,000	2.8%	-0.60%
Paper and Allied Products	26	1,740	8.4% ¹	621,000	3.7%	4.70%
Printing and Publishing	27	1,080	5.2%	1,488,000	8.9%	-3.64%
Chemicals and Allied Products	28	1,949	9.4%	846,000	5.0%	4.37%
Petroleum and Coal Products	29	468	2.3% ¹	113,000	0.7%	1.59%
Rubber and Misc. Products	30	1,206	5.8%	840,000	5.0%	0.82%
Leather and Leather Products	31	N/A	0.0%	106,000	0.6%	-0.63%
Stone Clay and Glass Products	32	686	3.3%	476,000	2.8%	0.48%
Primary Metal Industries	33	1,256	6.1%	677,000	4.0%	2.03%
Fabricated Metal Products	34	996	4.8%	1,359,000	8.1%	-3.28%
Industrial Machinery & Equipment	35	3,209	15.5%	1,774,000	10.6%	4.93%
Electronics; Other Electric Equipment	36	554	2.7%	1,427,000	8.5%	-5.82%
Transportation Equipment	37	1,881	9.1%	1,634,000	9.7%	-0.65%
Instruments and Related products	38	669	3.2%	901,000	5.4%	-2.13%
Misc. Manufacturing Industries	39	413	2.0%	363,000	2.2%	-0.17%
		20,709	100.0%	16,795,000	100.0%	

Footnote: 1. Estimated amounts

2. Variance is the absolute difference between each percentage

3. Source: S.C. Employment Commission

4. Source: US Dept. of Commerce, 1993. (Total does not include certain NEC industries)

Major Employers

Berkeley, Charleston & Dorchester Counties

<u>Employer</u>	<u>Product/Service</u>	<u># Employees</u>
Charleston Naval Base	United States Navy	41,883
Medical University of South Carolina	Healthcare, research; university	7,700
Charleston Air Force Base	US Air Force	6,050
Charleston County School District	Public education	5,150
Berkeley County School District	Public education	2,900
Roper Hospital	Healthcare	2,170
U.S. Postal Service	Postal Service	1,970
Piggly Wiggly Carolina Company Inc.	Grocery service	1,800
Bosch, Robert Corporation	Fuel Injection & Braking System	1,750
Westvaco Corporation	Lumber, Paper, Packaging, Chemicals	1,740
Trident Regional Medical Center	Healthcare	1,600
City of Charleston	Municipal Government	1,500
Dorchester County School District 2	Public education	1,500
Charleston County	County Government	1,300
Bon Secours – St. Francis Xavier Hospital	Healthcare	1,160
Wal Mart Stores	Retail	1,100
Santee Cooper Public Service Authority	Electric Utility	1,000
College of Charleston	Higher Education	1,000
R.H. Johnson DVA Medical Center	Healthcare	1,000
K – Mart Stores	Retail	900
InterTech Group Inc	Manufacturing Holding Company	830
Bi – Lo Inc.	Grocery stores	750
Coatal Center (CDMR)	Residential care	720
Southeast Service Corporation	Contract janitorial services	700
Kiawah Island Resort	Resort	700
DuPont de Nemours, E.I. and Company	Textile fiber (dacron polyester)	650
Alumax of South Carolina	Primary and alloyed aluminum ingots	630
City of North Charleston	Municipal Government	600
Southern Bell Telephone	Telecommunications services	600
SC Electric and Gas Company	Electric Utility	600
Miles Inc.	Dyes, organic pigments	600
The Post and Courier	Newspapers	600
Main – Waters Management Inc.	Fast food franchise operator	600
General Dynamics: Electric Boat Division	Heavy steel fabrication	600
The Citadel	Higher Education	560
Charleston Memorial Hospital	Healthcare	550
Food Lion	Grocery stores	550
Berkely County Government	County Government	520
Pelican Food Systems	Restaurants	500

While outside the scope of this study, some of the industrial classifications are generally consistent with what is perceived to be some of the inherent strengths of the greater Charleston area, particularly with respect to drugs, pharmaceuticals and research and development headquarters companies. Additionally, the skills from the naval base can be used to recruit industrial prospects wishing to have specialized skills for their operations. This is especially apparent in the metal fabrication, machinery and equipment and electronics manufacturing groups.

Approximately 25.0% (about 46,000) of the entire labor force (about 200,000) is employed by the Charleston Navy Base. In fact, the employment at the Naval Base is a little over twice that of the entire Charleston Area manufacturing sector employment (approximately 20,000).

The implications of both the large number of military and military related personnel as well as the distinct absence of certain key industrial sectors should provide greater guidance to the selection of target industries as opposed to those that are easy to attract for whatever reason. In short, those industries that demonstrate an affinity to the Charleston area because of certain attractive elements need not be heavily recruited except to the extent where profound competition from other communities is in evidence. In contrast, a solid recruiting strategy should be focused on those industries that are both absent, yet desirable for the region. For those industries not already present, incentives should be created to induce them. Probably the most attractive feature a community has to offer in the next decade will be quality of life and quality of the workforce.

The current dilemma facing Charleston is due to the imbalance of the economy that has relied heavily in the past on both the military and tourism. The previous chart shows that Charleston's manufacturing sector is dominated by essentially four industries, and is significantly below the national average in six key industries:

<u>SIC Code</u>	<u>Industry Under-representation</u>
2200	<i>Food & Other Kindred Products</i>
2400	<i>Apparel and Other Textile Products</i>
2900	<i>Printing and Publishing</i>
3400	<i>Fabricated Metal Products</i>
3600	<i>Electronics and Other Electrical Equipment</i>
3800	<i>Instruments and Related Products</i>

The workforce talent surplus of the Charleston area will be best suited to recruit the last three industrial sectors for fabricated metal products, electronics and other related electrical equipment, and instruments and related products as opposed to food, apparel and printing and publishing.

Infrastructure Availability

One of the single most important attributes of a community is the condition and cost of key elements of infrastructure. While infrastructure is not considered from a qualitative aspect when evaluating a community, it is many times used as a screening mechanism as a quantitative measure to either retain or delete a community for further consideration. As a result, providing adequate information to prospects that shows both adequate resources are available and are reasonably priced are crucial.

Typically, in the site selection process, a recurring and non recurring cost analysis is performed which evaluates the relative cost impact of these costs. With respect to recurring costs, these costs include calculations for water, sewer, power, natural gas, labor, taxes and transportation. Based on the investigations of this study, the water and sewer costs for the Tri-County region are in no event out of the ordinary. In fact, in many cases the costs are quite reasonable. With regard to power rates; however, the greater Charleston region shows a distinct cost advantage for those industries that are energy intensive. Not surprising, due to the ownership structure of the gas and electrical resources of the region, natural gas in the Charleston region is considerably higher than most regions in the country. While this in and of itself is not an impediment, if local gas companies are willing to negotiate reasonable transportation rates for bulk purchases of natural gas at the well head on the spot market. If they are not, however, then this can be a severe recruiting liability.

Water and Sewer

Industrial prospects when evaluating communities invariably perform a quick assessment of the local water and waste treatment facilities. Such an assessment includes the design capacity, average daily usage and plans for future expansion. A rule of thumb for site selectors in general is that if the system is at 80.0% of its rated capacity then it is not adequate unless there are plans in place to expand the system. The fact is, the estimated usage by a potential prospect may have no significant impact on the system. For example, 20.0% remaining capacity on a designed system of 100.00 MGD still allows for a 20.0 MGD excess. Nevertheless, site selectors typically use this rule of thumb whether fair or not. The lesson is to make sure that site selectors understand all three factors (design capacity, avg. usage and future expansion) in terms of actual numbers as opposed to percentages.

The Commission of Public Works of the City of Charleston operate the water system which serves the city, a large section of Charleston County and parts of Dorchester and Berkeley Counties. Sources of supply are primarily from the Edisto River and the Bushy Park Reservoir.

Charleston County has seven sewer systems, five operated by municipalities and two by public sewer districts. All treatment facilities are relatively modern and appear to have

adequate expansion capabilities.

Berkeley County water is provided by several different systems including the City of Charleston, Monck's Corner, St. Stephens and Goose Creek.

Dorchester County is served by the Dorchester County Water Authority, the St. George Water Department and the City of Summerville. Sources of supplies are primarily from wells.

The following tables show the various water and waste water treatment facilities with their respective total production capacity, average production, average flows and current status regarding system adequacy.

Waste Water Treatment Summary

<u>Location</u>	<u>County</u>	<u>Present Design Capacity¹</u>	<u>Cumulative Permitted Flow¹</u>	<u>SCIP Estimated Available¹</u>	<u>Avg Flow June 1994¹</u>	<u>Max (Peak Day) June 1994¹</u>	<u>Permitted Flow ≥ 80% Capacity</u>	<u>Actual Flow ≥ 80% Capacity</u>	<u>Pretreatment</u>
BCW&SA/Lower Berkeley	Berkeley	15.0000	9.2640	5.7360	4.8260	5.5320	N	N	Y
Town of Hanahan	Berkeley	1.3000	1.1950	0.1050	1.7770	1.2310	Y	Y	N
BCW&SA/Central Berkeley	Berkeley	0.3500	1.1510	0.1990	0.1360	0.1430	N	N	N
BCW&SA/Pimlico Subdivision	Berkeley	0.1300	0.9300	0.0370	0.1440	0.1570	N	Y	N
NCSD/Felix C. Davis	Charleston	27.0000	18.7730	8.2270	17.4300	18.6700	N	N	Y
Charleston/Plum Island	Charleston	27.0000	20.2870	6.7130	16.7000	19.5000	N	N	N
Mt. Pleasant/Main	Charleston	3.7000	4.4400	0.0740	3.5000	3.8000	Y	Y	N
St. Andrews PSD/Pierpont	Charleston	1.5000	1.4170	0.0830	1.2000	1.9000	Y	N	N
Town of Monck's Corner	Charleston	1.5000	1.0690	0.5310	0.8160	0.8310	N	N	N
St. Andrews PSD/Savage Rd.	Charleston	1.5000	1.4820	0.0180	1.0000	1.6000	Y	N	N
Town of St. Stephen	Charleston	1.0690	0.4140	0.3600	0.1220	0.1820	Y	Y	N
Town of Sullivan's Island	Charleston	0.5700	0.5600	0.0100	0.4650	0.5200	Y	N	N
Summerville/Ox Pond	Dorchester	10.0000	4.5400	5.4600	3.9000	4.0000	N	N	N
Dorchester PW/Lower Dorchester	Dorchester	4.0000	3.7280	0.2720	1.6000	2.1000	Y	N	Y
Town of St. George	Dorchester	0.8000	0.5230	0.2770	0.2900	0.6100	N	N	N
Town of Harleyville	Dorchester	0.1220	0.0140	0.1060	0.2000	0.0400	N	N	N

Source: South Carolina Infrastructure/Economic Development Project (SCIP)
State, Development Board

Footnote: Expressed in Million Gallons Per Day

Water System Treatment Summary

<u>Location</u>	<u>County</u>	<u>Total Prod. Capacity¹</u>	<u>Average Production¹</u>	<u>Production Available¹</u>	<u>Quantity</u>	<u>Quality</u>	<u>Protection from Contamination</u>	<u>Sanitary Protection</u>	<u>Adequate Pressure</u>	<u>Overall Rating</u>
Town of St. George	Dorchester	0.7390	0.364	0.375	S	S	S	S	S	S
Town of Ridgeville	Dorchester	0.4518	0.0005	0.4513	S	S	I	S	S	S
Town of Harleyville	Dorchester	0.2400	N/A	N/A	U	S	U	S	U	U
Town of Summerville	Dorchester	6.5000	5.0000	1.5000	S	S	S	S	S	S
DCWA/Tranquil Acres	Dorchester	0.3696	0.1302	0.2394	S	S	S	N	S	S
DCWA/Reevesville	Dorchester	0.3600	0.1620	0.1980	S	S	S	U	S	S
DCWA/Knightsville	Dorchester	0.8880	0.6000	0.2880	S	S	S	S	S	S
St. Johns Water	Charleston	N/A	2.2690	N/A	S	S	S	U	S	S
City of Charleston	Charleston	78.6000	50.4300	28.1700	N/A	N/A	N/A	N/A	N/A	N/A
Isle of Palms	Charleston	3.931	0.7490	3.1820	S	U	U	U	S	U
Mt. Pleasant	Charleston	10.9440	4.0589	6.8851	S	S	S	S	S	S
Town of Sullivan's Island	Charleston	0.2000	0.0900	0.1100	U	U	U	U	U	U
St. Andrews/Pierpont	Charleston	2.458	0.7120	1.7460	S	S	I	S	S	S
BCWSA – Sangaree W/D	Berkeley	2.398	1.1630	1.2350	S	S	U	U	S	U
Town of Jamestown	Berkeley	0.0288	0.2470	0.0041	S	S	S	U	S	S
Town of St. Stephens	Berkeley	0.57	0.2760	0.3000	S	S	U	U	S	U

Source: South Carolina Infrastructure/Economic Development Project (SCIP)
State, Development Board

Footnote: Expressed in Million Gallons Per Day
I=Inadequate, S = Satisfactory, U=Unsatisfactory, N/A = Non – Applicable

Electricity

Electric Power in the Tri-County region is provided by South Carolina Electric and Gas Company, South Carolina Public Service Authority (Santee Cooper) and two electric cooperatives - Berkeley Electric and Edisto Electric Cooperatives. For many industries the cost of electric power is the overriding factor driving the site selection process. The following data demonstrates the competitive advantage that the Charleston region enjoys due to the low industrial power rates for South Carolina Gas & Electric.

Comparative Electric Power Rates

<i>State</i>	<i>Power Company</i>	<i>Avg. Cents Per KWH Commercial</i>	<i>Avg. Cents Per KWH Industrial</i>	<i>Avg. Cents Per KWH Residential</i>
<i>South Carolina</i>	<i>Carolina Power & Light</i>	<i>6.96</i>	<i>5.19</i>	<i>8.09</i>
	<i>Duke Power</i>	<i>6.44</i>	<i>4.11</i>	<i>7.25</i>
	<i>S.C. Electric & Gas</i>	<i>5.57</i>	<i>3.86</i>	<i>7.07</i>
<i>North Carolina</i>	<i>Carolina Power & Light</i>	<i>6.89</i>	<i>5.58</i>	<i>8.31</i>
	<i>Duke Power</i>	<i>5.88</i>	<i>4.44</i>	<i>7.34</i>
	<i>Nantahala Power</i>	<i>5.53</i>	<i>4.10</i>	<i>6.60</i>
	<i>North Carolina Power</i>	<i>6.78</i>	<i>5.10</i>	<i>8.43</i>
<i>Virginia</i>	<i>Appalachian Power, Co.</i>	<i>4.89</i>	<i>3.75</i>	<i>5.68</i>
	<i>Delmarva Power & light</i>	<i>7.18</i>	<i>6.49</i>	<i>9.36</i>
	<i>Old Dominion Power</i>	<i>5.20</i>	<i>4.26</i>	<i>5.07</i>
	<i>Potomac Edison</i>	<i>6.30</i>	<i>4.72</i>	<i>6.84</i>
	<i>Virginia Power</i>	<i>6.21</i>	<i>4.29</i>	<i>8.01</i>
<i>Georgia</i>	<i>Georgia Power & Light</i>	<i>6.21</i>	<i>5.09</i>	<i>7.64</i>
	<i>Savannah Electric</i>	<i>7.28</i>	<i>4.23</i>	<i>7.09</i>
<i>Alabama</i>	<i>Alabama Power Co.</i>	<i>6.91</i>	<i>4.48</i>	<i>7.18</i>
<i>Florida</i>	<i>Florida Power & Light</i>	<i>6.75</i>	<i>5.41</i>	<i>8.07</i>
	<i>Florida Power Corp.</i>	<i>5.81</i>	<i>4.79</i>	<i>7.97</i>
	<i>Gulf Power Corp.</i>	<i>5.64</i>	<i>4.31</i>	<i>6.60</i>
	<i>Tampa Electric</i>	<i>6.73</i>	<i>4.65</i>	<i>8.10</i>

Source: Edison Electric Institute, "Typical Residential, Commercial and Industrial Bills, Winter 1994.

As can be seen from the above table, the only competition from a rate per KWH standpoint for industrial rates is Appalachian Power Company in Virginia with a rate of \$0.00375 per KWH as opposed to \$0.00386 per KWH for South Carolina Electric & Gas. What is not shown in this table is the ability of Berkeley Cooperative to discount rates even further than that which is customarily charged by South Carolina Electric & Gas. For those industries where power cost is a major factor, there should be little if any competition in the Southeastern United States with the Charleston area.

Natural Gas

The price of natural gas in the Charleston region is relatively high compared to other regions in the United States. Examination of the following chart demonstrates this fact by presenting a ranking of gas utility prices by state. As can be seen from the chart there are only 6 states who have higher gas prices than South Carolina. Another alternative for gas consumption is the purchase of gas at the well head on the spot market. As exhibited in the chart titled "Spot Market Gas: Posted Gas, the prices posted by the natural Gas Clearinghouse are considerably less.

As an alternate fuel source to electricity, natural gas is not a viable alternative taking into consideration the relatively low price per KWH for power in the Charleston area. Nevertheless, there are some operations where the use of natural gas as an energy source shows a demonstrable advantage not only from a cost standpoint, but from a processing standpoint as well. It is probably appropriate for the local economic development organizations to have closer ties with South Carolina Electric & Gas to better understand the opportunities that are present with each respective energy source (electricity versus natural gas).

Ranking of Gas Utilities Prices by State

<i>Rank</i>	<i>State</i>	<i>Price MCF</i>	<i>Rank</i>	<i>State</i>	<i>Price MCF</i>
1.	Hawaii	12.63	27.	Kentucky	4.95
2.	Rhode Island	7.37	28.	Montana	4.93
3.	Maine	6.49	29.	Missouri	4.82
4.	Alabama	6.24	30.	Texas	4.81
5.	New York	6.10	31.	Washington	4.69
6.	Washington DC	6.03	32.	Michigan	4.68
7.	South Carolina	6.02	33.	North Dakota	4.68
8.	Pennsylvania	6.01	34.	Kansas	4.59
9.	West Virginia	5.98	35.	Arkansas	4.57
10.	Louisiana	5.92	36.	Mississippi	4.57
11.	New Jersey	5.90	37.	New Mexico	4.57
12.	North Carolina	5.87	38.	Wyoming	4.57
13.	Delaware	5.79	39.	California	4.55
14.	Florida	5.76	40.	Iowa	4.53
15.	Georgia	5.76	41.	Oklahoma	4.47
16.	Maryland	5.57	42.	Nevada	4.44
17.	Virginia	5.47	43.	South Dakota	4.18
18.	Ohio	5.45	44.	Nebraska	4.17
19.	Arizona	5.30	45.	Utah	4.16
20.	Oregon	5.24	46.	Minnesota	4.14
21.	Idaho	5.23	47.	Colorado	3.98
22.	Tennessee	5.19	48.	Alaska	2.76
23.	Wisconsin	5.14	49.	Connecticut	N/A
24.	Vermont	5.06	50.	Massachusetts	N/A
25.	Illinois	5.02	51.	New Hampshire	N/A
26.	Indiana	4.97			

Source: Department of Energy Natural Gas Monthly, Energy User News, April 1994.

Spot Market Gas: Posted Prices

<i>Pipeline</i>	<i>Current</i>	<i>2/94</i>	<i>1/94</i>	<i>3/93</i>
<i>ANR(OK).....</i>	<i>2.10</i>	<i>2.10</i>	<i>1.95</i>	<i>1.80</i>
<i>Columbia(Gulf).....(LA).....</i>	<i>2.35</i>	<i>2.35</i>	<i>2.05</i>	<i>1.90</i>
<i>Northwest Pipeline.....(WY).....</i>	<i>1.95</i>	<i>1.80</i>	<i>1.90</i>	<i>1.80</i>
<i>Panhandle Eastern.....(OK).....</i>	<i>2.10</i>	<i>2.10</i>	<i>1.05</i>	<i>1.80</i>
<i>Koch Gateway(LA).....</i>	<i>2.25</i>	<i>2.25</i>	<i>1.95</i>	<i>1.80</i>
<i>Texas East.....(TX).....</i>	<i>2.20</i>	<i>2.20</i>	<i>1.95</i>	<i>1.85</i>
<i>Texas Gas (Zone 1).....(LA).....</i>	<i>2.30</i>	<i>2.35</i>	<i>2.05</i>	<i>1.85</i>
<i>Natural Gas Pipeline.....(TX).....</i>	<i>2.10</i>	<i>2.10</i>	<i>1.95</i>	<i>1.80</i>
<i>El paso(TX).....</i>	<i>2.00</i>	<i>1.90</i>	<i>1.95</i>	<i>1.85</i>

Source: Department of Energy Natural Gas Monthly, Energy User News, April 1994.

Port of Charleston

Probably the single most important feature of the Tri-County region is the Port of Charleston. The port is the number #1 containerized port on the South Atlantic and Gulf Coasts and is second only to the combined ports of New York & New Jersey. Foreign Trade Zone number #21 is located twelve miles from the Port of Charleston and two miles from Interstate 26. According to the American Association of Port Authorities, the Port of Charleston ranked 11th in the total value of imports and exports in 1992 and has continued to grow since then.

As more companies endeavor to expand their markets internationally, port access is beginning to play a leading role in the site selection equation. Often, prospective recruits are more impressed with the level of cooperation between port, state and local officials as much as they are with the port's modern facilities. In this respect, the Charleston area can do much to recruit companies who plan to manufacture and either import or export.

There are four terminals which serve the Port of Charleston which handle both container and breakbulk cargo: The terminals include the North Charleston Terminal, the Union Pier Terminal, the Columbus Street Terminal and the Wando Terminal and combined feature:

- 17 berths and 15 container cranes
- A heavy lift derrick capable of handling cargo weighing 475 tons.
- A floating ro/ro ramp
- An export packaging service
- ORION, an advanced computerized shipping document network that links key businesses and agencies involved in cargo movement.
- Neutral container chassis leasing pool

Real Estate Development Potential

The potential real estate development opportunities are almost limitless for the Charleston region. Examination of Section 4 shows the extent and potential breadth of development activities that have occurred in the past and can act as a benchmark for the possibilities that exist for the future in the greater Charleston region. Reuse of the former base should obviously take advantage of the existing infrastructure in place; however, it should not be limited to only port related activities. (Reference Section 4)

Local, State and Federal Inducements

Federal Funding

Federal funding is limited in scope to project grants whose intent is to provide funding for military base reuse studies as opposed to inducements to attract new and or expanding industries.

While these funds will do little to attract industry into the region initially, in the long term the development of strategic strategies as well as accessing funds for the development of infrastructure will be an invaluable asset for the long range planning and use of the facilities that are available. It is expected that these funds have been investigated in part; however, in the event that they have not, it will be important to access these funds for a comprehensive study for economic feasibility studies and master planning of the proposed facilities to be utilized

The funding is authorized by the Defense Authorization Act, 10 U.S.C. 2391. The following information provides a synopsis of the Military Base Reuse Studies and Community Planning Assistance:²

Objectives: To assist state and local governments conduct military base reuse studies and resolve serious community economic problems resulting from: Military base closures, openings, and realignments. To conduct community impact planning that will be beneficial to the Department of Defense and affected jurisdiction.

Types of Assistance: Project Grants

Uses & Restrictions: DoD funding may be provided for military base reuse studies required for the reuse of former military base property. DoD may provide community planning assistance through a cooperative grant or agreement for planning activities deemed beneficial to DoD and the affected community. Activities include, but are not limited to: Staffing, operating and administrative costs; travel; public information; and general or specialized impact studies conducted by contractors or State and local government employees.

Eligibility:

An applicant may be eligible for DoD funding for military base reuse studies if the Secretary of Defense has announced the local military installation is a candidate for closure or that a final decision has been made to close the facility; and one of the following activities is proposed or actually occurs:

Applicant Eligibility:

1) Increased activity

a) the assignment of more than 2,000 military, civilian and DoD contractor personnel to a new or expanded installation:

b) the assignment of more military, civilian, and contractor DoD personnel than the number equal to 10 percent of employment in counties or independent municipalities within 15 miles of the installation, whichever is less:

2) Decreased Activity: from alignment/closure of an installation.

Additionally, the Secretary of Defense must make determination that the action is likely to impose a significant impact. DoD funds may be provide only if other Federal, State or Local resources are not adequate. State or local governments, regional organizations composed of State and local governments, regional organizations, and Federally recognized Indian Tribes located within the 50 States, the District of Columbia, the Commonwealth of Puerto Rico and Guam are eligible if the above statutory criteria are met.

Beneficiary Eligibility:

State and local governments, regional organizations composed of State and local governments, or Federally Recognized Indian Tribes that represents the impacted area.

Credentials/Documentation:

Documentation that: 1) the Defense action will occur and that it has imposed or is likely to impose a substantial or serious impact; 2) other Federal, State, or local resources are not adequate; 3) the threshold criteria of the legislation has been or will be met; the community planning will be beneficial to DoD and the affected community; and 4) there is an immediate and substantial need for

the funding.

Application/Award: Preapplication Coordination:

Requirements should be discussed with other State and Federal agencies to ascertain if funding is available.

Application Procedure:

The standard application forms required by 32 CFR Part 278 must be used for this program. Applications and supporting documents should be submitted to the Director, Office of Economic Adjustment, OASD (FM&P), Pentagon, Room 4C767, Washington, DC, 20301-4000.

Award Procedure:

Applications are approved by the Director, Office of Economic Adjustment, in consultation with the Military Department involved.

Considerations: Formulas & Matching Requirements:

This program has no statutory formula. A minimum of 25.0% should be obtained from non federal sources, in the form of cash.

Length and Time Phasing:

Up to 1 year, funds are disbursed quarterly or as required. Funds should be expended during the grant period.

Port Assistance: In accordance with the provisions of the OMB Circular No. A-128, "Audits of State and Local Governments", State and local governments that receive financial assistance of \$100,000 or more within the State's fiscal year shall have an audit made for that year. State and local governments that receive between \$25,000 and \$100,00 within the State's fiscal year shall have an audit made in accordance with Circular No. A-128, or in accordance with Federal Laws and regulations governing the programs with which they participate.

Average Assistance: Average assistance ranges from \$100,000 to \$200,000.

Regulations: See OMB Circular Nos. A-128 and A-87, 32 CFR Part 278 and Part 280, Subpart F, Appendix C.

Contact: Director, Office of Economic Adjustment
OASD (FM&P)
Pentagon
Room 4C767
Washington, DC 20301-4000

Telephone: (703) 697-9155

Related Programs: 11.307, Special Economic Development and Adjustment Program-Sudden and Severe Economic Dislocation and Long Term Economic Deterioration; 12.600, Community and Economic Adjustment; 14.218, Community Development Block Grants/Entitlement Grants; 14.219, Community Development Block Grants/Small Cities Program; 93.032, Community Services Block Grant-Discretionary Awards.

State and Local Incentives

The state and local incentives offered by the state of South Carolina can be instrumental in recruiting industries not only to the Charleston Tri-County region but also to areas deemed appropriate for reuse.

Industrial Revenue Bonds Counties, municipalities and several authorities may issue tax exempt bonds, termed IRB's, to manufacturing firms. Such bonds generally carry an interest rate of approximately 70.0% of prime, and are typically issued for terms ranging from 1-0-20 years. The company's credit is pledged to repay the bonds rather than that of the governmental entity issuing the bonds.

Uses include the acquisition of fixed assets such as land and buildings, water and sewer treatment facilities and disposal facilities, machinery, equipment and office facilities and furnishings. The renovation and expansion of existing facilities are also eligible, and up to 2.0% of the bond proceeds may be used for administrative costs.

A composite bond program is available through the state's Jobs-Economic Development Authority (JEDA). JEDA is authorized

to issue IRB's as a pooled bond on behalf of small businesses which, although eligible for tax exempt status, would find the cost of stand alone issues uneconomical. The maximum issue is \$10.0 million and the minimum for practical purposes is \$500,000.

Small Business Loans

The Federal Government provides for a Small Business Administration 503 Loan Program which is packaged and serviced by the City-Wide Development Corporation with commercial bank participation. The 503 program provides monies to finance plant construction, to acquire machinery and equipment, to buy land and to make leasehold improvements.

All loans are contingent on job creation. The maximum loan is \$750,000 which cannot exceed more than 40.0% of the total project cost. There must be a minimum of 10.0 equity infusion. Small Business Administration Guaranteed Load Program Loans made through commercial lenders guaranteed up to 90.0% of the loan amount by the SBA. Guarantees cannot exceed \$500,000.

Community Development

Administered by the Governor's Office, this program provides three funding measures. Grant programs make funds available to counties or municipalities to help provide or improve infrastructure and are intended to create or retain permanent jobs. Grants are awarded on a competitive basis.

The Governor's Discretionary Program allows monies to local governments on an "as needed" basis for such purposes as water and sewer extension, site preparation and rehabilitation or construction of buildings.

Loan Program:

Funds are available to business and industry for construction purposes. At least 52.0% of the borrower's employees must be persons with low or moderate household incomes. The interest rate is negotiable.

JEDA:

Jobs-Economic Development Authority loan may provide up to \$500,000 (or 40.0% of the project cost - whichever is less) for capital expenditures. The participation of a unit of local government is required in all direct loans and/or guarantees from JEDA. These loans interest rates range from 85.0% of prime to plus 1.0% depending on the term of the loan, with an interest floor of 8.5%. The maximum term is 15 years. The job-to-dollars ratio cannot exceed one job per \$10,000.

- JTPA:** Job Training Partnership Act will reimburse a company for up to half of the wage costs for certain workers who are in an on-the-job training program. The training time period for wage reimbursement is reflective of the amount of training needed. This program may be used along with the state's pre-employment job training.
- Fee-In-Lieu Tax:** South Carolina counties are empowered to negotiate a fee in lieu of property taxes with prospects or existing industries which commit to large capital investments in the state. The firm must invest an initial minimum of \$85.0 million. Projects must be financed with taxable IRB'S and a purchase-leaseback agreement with the political subdivision holding actual title to the property. The County can negotiate down to a fee equivalent to 6.0% assessment ratio.
- Highway Set-Aside:** \$10.0 million in set-aside annually by the state of South Carolina specifically for the development of highways essential to economic development projects. These funds can be used for the construction of new or improved roads for the benefit of new or expanding business.
- Palmetto Basic Building:** This fund, initially capitalized at @2.0 million, provides low interest, first mortgage loans to develop good basic building projects in the 24 counties which were designated Presidential declared Disaster areas in the aftermath of Hurricane Hugo. Funding is provide by the JEDA to the Berkeley-Dorchester-Charleston Council of Government's local development corporation. Loans will normally be in the range of \$250,000 to \$350,000, with a maximum of \$400,000.
- COG's Revolving Loan:** The Berkeley-Dorchester-Charleston Council of Governments established a revolving fund for economic development activities. These funds are available to help finance fixed assets and working capital. The average size of the loan is \$50,000. The maximum loan amount is \$100,000 and the minimumis \$15,000.
- Corporate HQ's & Office:** The state provided incentives for corporations to establish their headquarters or regional operations in South Carolina. A five year tax moratorium on county ordinary property is available to headquarters, administrative and distribution offices creating 75 new full-time jobs. Headquarters offices meeting the defined criteria are eligible for a grant up to \$500,000 to help offset the costs associated with establishing operations in South Carolina.

Headquarters and administrative offices establishing operations in South Carolina with a minimum of 75 new full-time jobs receive a 20.0 percent state tax credit. Credit is given for the costs of construction or five year lease expense of actual office space.

Credits for Infrastructure: Credits to corporate income taxes are permitted for corporate contributions to infrastructure (water, sewer, roads) construction or improvement. Credit is permitted for 50.0% of the expense, not to exceed \$10,000. Unused credits may be carried forward three years.

Tax Credits\Exemptions: A \$300 corporate income tax credit, or insurance premium tax credit for insurance companies, is granted for each new full-time job created, with a minimum of 50 jobs. Credits are granted for a five year period, beginning with year 2 through 6 after the creation of the job. Expansion which occur within the 5 year certification period are also eligible to receive the jobs tax credit. Credits used in any single year may not exceed 50.0% of the year's tax liability. Unused credits may be carried forward for 10 years.

Taxes:

- South Carolina has no manufacturer's inventory tax.
- No unitary tax on worldwide profits.
- No wholesale sales tax.
- Permits a 15 year net loss carry forward period.
- Exempts, for a period of five years, all new and newly expanded manufacturing facilities with a capital investment in excess of \$50,000 from all property taxes except those levied for public schools and certain special taxes.
- Provides a sales tax exemption for all manufacturing machinery, repair parts, industrial electricity and fuels, and materials which become and integral part of the finished product.
- Exempts air and water pollution control and abatement equipment from all local property taxation.
- Assesses a six percent, rather than a 10.5%, the real estate property owned by or leased to a manufacturer and used for research and development purposes and real property owned by or leased to a manufacturer and used as an office building.

Job Training: Special Schools is part of the Economic Development Division of the State Board for Technical and Comprehensive Education. Special Schools provides individually designed pre-employment training programs

for companies seeking to relocate or expand in the Berkeley-Dorchester-Charleston county area at virtually no cost to the owner. The program can include the following:

- Trainee recruitment, screening and testing in conjunction with the South Carolina Employment and Security Commission
- Instructor recruitment and training\
- Provision of training site(s), if not conducted on company premises.
- Development of instructional materials including print, audio or video.
- Complete program management from beginning to successful start-up and expansion assistance.

An interesting law which is available to counties wishing to collaborate to form industrial or business parks can be found in Section 4-1-170 of the South Carolina Code of Laws and Regulations. The law reads as follows:³

Section 4-1-170

By written agreement, counties may develop jointly an industrial or business park with other counties within the geographic boundaries of one or more of the member counties as provided in section 13 of Article VII of the State Constitution. The written agreement entered into by the participating counties must include provisions which:

- 1) Address sharing expenses of the park;*
- 2) Specify a percentage the revenue to be allocated to each county;*
- 3) Specify the manner in which revenue must be distributed to each of the taxing entities within each of the participating counties.*

For the purposes of bond indebtedness limitation and for the purpose of computing the index of taxing ability pursuant to Section 59-20-2-0(3), allocation of the assessed value of the property within the park to the participating counties and to each of the taxing entities within the participating counties must be identical to the allocation of revenue received and retained by each of the counties and by each of the taxing entities within the participating counties."

The interesting provision of the regulation is that the business/industrial park is treated as a separate entity and can avail themselves of the economic recruitment incentives of any of the counties that are a part of the agreement. As a result, the maximum allowable jobs tax credit and other available incentives can be taken regardless of where the industrial park physically resides. This mechanism was recently used in the recruitment of Magna International to Greenville county where jobs tax credits were allowed even though Greenville County is technically not eligible for the credit.

BIBLIOGRAPHY

BIBLIOGRAPHY

Section 2.: Trends Affecting Development

1. Lyne, Jack, Carolinas Lead Southern Surge in Site Selection's Inaugural Business Climate Rankings.", Site Selection, October 1993, PP. 1170-1173.
2. Sample, James O., "Should you reengineer, Relocate or Both", Expansion Management, July-August 1993, pp. 6.
3. Patterson , Eric and Nachman-Hunt, Nancy, "Ahead by a Nose - Services Get a Fast Track, Manufacturers Move Slowly.", Expansion Management, March-April 1993. pp. 14-16.
4. Stackhouse, Steve., "Today's Growth Industries." Area Development, September 1993, pp. 76.
5. Heenan, David A., "Small Towns, Big Business: The New Location Frontier.", Site Selection, 1993. pp. 1368..1380.
6. U.S. Industrial Outlook 1994, 35th Annual Edition, U.S. Department of Commerce.
7. Bryant, Frank. "EPACT Aftermath; States Begin to Test Waters on Retail Wheeling.", Energy User News, Vol 19, No 1, January 1994, pp. 1, 4, 61 and 62.
8. Mandel, Michael J., "The Rush to Roll Back Taxes", Business Week, February 7 1994, pp. 114-115.
9. Sparks, Robert M., "NAFTA's Implications for Economic Development", Area Development, January 1994. pp. 31-32.
10. Dillingham, Susan, "The Rating Game: Decisions Can Turn on the Price of Power", Plants Sites & Parks, November\December 1993, pp. 38-44.
11. Farrell, Christopher; Melcher, Richard; Therrien, Lois; Schiller, Zachery; Hof, Robert D.; Zellner, Wendy and Jones-Yang, Dori, "It Won't Take your Breath Away But...The Economy is Poised for Modest, Steady Growth", Business Week, January 7, 1994, pp. 60-66.
12. Venable, Tim, "Site Selection's 1992 Top Groups", Site Selection, April 1993, pp. 298-334.

13. Venable, Tim, "Development Groups Go High Tech In Serving Corporate Clients", Site Selection, April 1993, pp. 272-296.
14. Siting and Consulting Services Qualification brochure, compliments of Fluor Daniel, Inc.'s Siting and Consulting Services Group.
15. McLeman, Neil, "Agency Competition Sharpens Focus", Corporate Location, November 1993, pp. 21.
16. Murcio, F. Javier and Savaresem Dierdre, "NAFTA Makes North America Hot Property", Expansion Management-1993 Atlas and Guide, pp. 14.
17. Bergeron, Tom, "Corporate Executives Rate Site Selection Factors" Area Development, December 1993, pp. 39-55.
18. Barkley, David L. and Hinschberger, Sylvian, "Industrial restructuring: Implications for the Decentralization of Manufacturing to Nonmetropolitan Areas", Economic Development Quarterly, Feb 1992, pp. 77.
19. Carlsson, B., "Flexibility and the Theory of the Firm", International Journal of Industrial Organization 7, 1989, pp. 179-204, and Item number 18 as previously listed
20. Citation: Stephen S. Roach, economist at Morgan Stanley & Company.
21. U.S. Office of Technology Assessment, *After the Cold War: Living with Lower Defense Spending*, OTA-ITE-524 (Washington, DC: U.S. Government Printing Office, February 1992, pp 5.
22. Beebe, Todd and Liljenwall, Ted G., "NAFTA: How to Maximize Opportunities in Mexico", Site Selection, December 1993, pp 1405.
23. U.S. Office of Technology Assessment, *Paying the Bill: Manufacturing and America's Trade Deficit*, OTA-ITE-390, (Springfield, VA: National Technical Information Services, February 1990.
24. Staff Writers, "Site Selection", Business Facilities, January 1994, pp 21,22 & 24.
25. Elliott. Jr. Charles K. and Shapiro, Andrew, H., "Changing U.S. Labor Force Presents New Challenges for Corporations", Site Selection, June 1993, pp. 618-628.
26. Coffee, Hoyt E., "Big Labor's Long Slide", Site Selection, December 1993, pp. 1324-1331.

27. Haner, Tom. "Assessing a Labor Market, Simple Steps to Avoiding the Pitfalls", Site Selection, December 1993, pp. 1314-1322.
28. Coffee, Hoyt E., "Big Labor Slide", Site Selection, December 1993, pp. 1324-1327.
29. Wall Street Journal, May 24, 1993.
30. Associated Press, Greenville New Piedmont, "5 Year High In Hiring Predicted", February 28, 1994, Section C, Page 1.
31. U.S. Office of Technology Assessment, *After the Cold War: Living with Lower Defense Spending*, OTA-ITE-524 (Washington, DC: U.S. Government Printing Office, February 1992, pp 9.
32. Report of the Defense Conversion Commission, "Adjusting to the Drawdown", December 31, 1992.
33. Act No.# 93-851, Alabama State Legislative Action of September 7, 1993.
34. The Governor's Development Council Executive Summary of the Business Expansion and Support Act of 1994.
35. North Carolina's Financial Advantages for Business.
36. Hatch, C Richard, "Flexible Manufacturing Networks - Cooperation for competitiveness in a Global Economy", Corporation for Enterprise Development, ISBN: 0-9605804-8-4, 1988.
37. Harrison, Bennett, Economic Development Quarterly, Vol. 8, No. 1., February 1994, pages 3-18.
38. Harvard Business Review, Page 12, May-June 1994.
39. Davis, Steven. J.; Haltwinger, John; Shuh, Scott, Business Economist, Vol. 29, page 13-22, July 1994.

Section 4: Constraints and Potentials

1. Adjusting to the Drawdown, Report of the Defense Conversion Commission, pp. i, December 31, 1992.
2. Miller, William H., "Defense Conversion - the Fourth Time Around", Industry Week,

April 4, 1994, pp 20.

3. Ladesich, Jim, "Base Closures - A Economic "Kiss of Death", or a New Opportunity for Communities and Business? - A Staff Report, Business Facilities, April 1994, pp 40.
4. Quotation from Wallace Bishop, Senior Project Manger at the Office of Economic Adjustment.
5. "Civilian Reuse of Former Military Bases - Summary of Completed Military Base Economic Adjustment Projects, Office of Economic Adjustment, office of Assistant Secretary of Defense Force Management & Personnel, The Pentagon, Washington, D.C..
6. "Communities in Transition", The President's Economic Adjustment Committee,
7. Mackinnon, David, "Changes at Military Bases: A Community Planning Challenge", Federal Planner's Network, Summer, 1990.

Section 5.: Industrial Recruitment Resources Assessment

1. "Charleston Trident Area Economic Development Strategy", Growth Strategies Organization, April 1994, page 79.
2. Military Base Reuse Studies and Community Planning Assistance, Office of Economic Adjustment, Office of Assistant Secretary of Defense, Department of Defense.
3. Tax Information for a Manufacturing Plant Locating in South Carolina, Administrative Division South Carolina Department of Revenue, 1993, page 37.

APPENDIX

Appendix 1
1993 Site Selection Survey

Appendix 1

1993 SITE SELECTION SURVEY (All figures are percentages)

	Very Important	Important	Minor Concern	Of No Importance
LABOR				
Availability of skilled labor	44.6	44.2	9.4	1.9
Availability of unskilled labor	16.8	37.4	30.2	15.7
Worker\technical training programs	15.1	45.7	30.6	8.5
Labor costs	51.9	38.4	8.2	1.5
Low union profile	48.3	27.6	18.8	7.6
Right-to-Work state	42.4	28.2	21.8	7.6
TRANSPORTATION				
Highway accessibility	46.5	40.6	9.6	3.3
Railroad service	10.3	18.3	37.0	34.4
Accessibility to major airport	22.2	35.2	30.1	11.6
Waterway or ocean port accessibility	6.5	14.1	33.2	46.2
Availability of telecommunications services	40.5	40.2	13.6	5.7
FINANCE				
Availability of Long-term financing	49.4	39.5	7.8	3.4
Tax exemptions	41.3	41.7	13.6	3.4
State and local incentives	40.1	42.6	13.9	2.6
OTHER				
Nearness to major markets	34.7	42.2	17.5	5.6
Cost of land	24.9	45.3	20.8	9.1
Availability of land	22.9	49.6	19.0	9.7
Occupancy or construction costs	29.5	56.0	9.2	5.4
Raw materials availability	26.2	33.9	23.9	16.2
Energy availability or costs	39.7	43.5	11.1	5.7
Environmental regulations	44.8	32.6	16.1	6.5
Nearness to suppliers	16.7	42.1	29.9	11.4
Nearness to technical university	9.1	23.5	43.9	23.5
QUALITY OF LIFE FACTORS				
Climate	17.2	44.8	30.1	7.5
Housing availability	19.9	56.9	19.9	3.4
Housing costs	25.4	55.6	16.4	2.6
Health facilities	21.6	59.5	15.9	3.0
Ratings of public schools	28.1	52.4	15.4	4.1
Cultural opportunities	13.7	45.6	32.7	8.0
Recreational opportunities	9.5	50.5	36.1	3.9
Colleges and universities in area	16.6	40.0	35.1	8.3
Low crime rate	44.8	41.8	11.9	1.5

Source: Area Development, 1993.

Note: Survey is conducted primarily focused on manufacturing executives.

Appendix 2

Corporate Economic and Environmental Progress Continuum

Appendix 2

CORPORATE ECONOMIC AND ENVIRONMENTAL PROGRESS CONTINUUM

PARADIGM	INACTIVE Paradigm 1	REACTIVE Paradigm 2	RESPONSIVE Paradigm 3	PROACTIVE Paradigm 4
ORIENTATIONS	Short term growth and prosperity	Growth constrained by regulatory restrictions	Growth guided by environmental and economic concerns	Growth geared to sustainable development
DOMINANT TRENDS	Belief in infinite supply of resources	Meeting regulations, remediation standards.	Focus on efficiency, energy conservation beyond compliance	Convergence of business and environmental systems
ENVIRONMENTAL POLICY AND OPERATIONS	<ul style="list-style-type: none"> • Unregulated waste disposal. • Value only tangible goods & services. • High energy input per unit of production. • Dependence on quick fix. • Undeveloped communications with employees and public concerning environmental issues. • Management indifferent to environmental issues 	<ul style="list-style-type: none"> • Forced environmental assessment and compliance. • Business as usual plus required treatment and cleanup. • Anti-regulatory lobbying. • Determination of optimum pollution levels. • One way approach to external and internal communications. • Environmental issues isolated within one or two departments. 	<ul style="list-style-type: none"> • Proactive risk and impact assessment. • Proactive pollution prevention. • Energy efficient programs. • Reliance on renewable resources. • Beginning to think "Cradle-to-Grave". • Beginning dialogue with public and employees. • Executives visible and involved with issues. • Emphasis on environmental education and training. 	<ul style="list-style-type: none"> • Strong internal and external communications. • Life-cycle costing. • Environmental responsibility resides with every employee. • Systems approach integrating business and environmental functions. • Low energy input per unit of production.
POTENTIAL ADVANTAGES	<ul style="list-style-type: none"> • Immediate economic gain and profitability. • Reduced short-term costs of dealing with wastes. • Distribution of environmental costs to society. 	<ul style="list-style-type: none"> • Reduced penalties and fines. • extended resource availability. • Less negative publicity. • Awareness of legal requirements. 	<ul style="list-style-type: none"> • Prolonged industry life-cycle. • Anticipating cost of regulatory compliance. • Enhanced public image. • Reduced cost of production through efficiency. 	<ul style="list-style-type: none"> • High employee morale and productivity. • Maximum efficiency and utilizations. • Working relationship with community.
POTENTIAL DISADVANTAGES	<ul style="list-style-type: none"> • Risks higher for being blind-sided. • Poor public image. • Poor employee moral. • No long-term master plan to deal with shortages. • Exposure to financial liabilities and criminal prosecution. 	<ul style="list-style-type: none"> • Regulatory constraints to growth. • Extra costs of compliance. • Costs of crisis management. • Competitive disadvantage within industry. 	<ul style="list-style-type: none"> • Capital costs of retooling for greater efficiency. • Up-front costs of implementing new environmental policies. • More public scrutiny and exposure. • Alienation of industry and peers. 	<ul style="list-style-type: none"> • Sacrificing maximum short-term profitability. • Restructuring corporate policies and management styles creates disruptions. • Additional economic burden of internalizing.g environmental costs.

Source: Environmental Communications Associates.

Appendix 3

Canada, Mexico and the United States A Comparative Profile

Appendix 3

Canada, Mexico and the United States
A Comparative Profile

	CANADA	MEXICO	U.S.
ECONOMY			
Real GNP (\$ Billions).....	\$474.1	\$302.3	\$4575.7
Percent Real GNP Growth, 1991.....	-2.0%	-0.07%	3.6%
Consumer Price Increase, 1991.....	5.6%	22.7%	4.3%
Manufacturing Proportion of GNP, 1992.....	17.0%	25.0%	19.0%
DEMOGRAPHICS			
Population (Millions 1991).....	26.8	90.0	252.5
Percent of Population Under 1991	28.1%	40.0	29.2
Projected Annual Population Growth Rate, 1990-2000	0.9%	1.9%	0.7%
Per Capita GNP, 1992	\$20,783	\$2,921	\$20,629
EDUCATION			
Literacy Rate	99.0%	87.0%	97.0%
LABOR			
Labor Force (Millions)	13.5	31.8	123.9
Labor Force Annual Growth Rate, 1990-2000	1.2%	3.2%	1.3%
Unemployment Rate, 1992	11.3%	14.5% (Est.)	7.0%
Labor Force as Percent of Population	52.0%	38.4%	50.3%
Female Employees as a Percent of Populations	43.9%	27.8%	44.5%
Workweek (hours paid per week per manufacturing worker)	38.6	47.1	41.0
Percent of Workforce Unionized	36.2%	42.8	18.0%
Industrial Disputes (working days lost per 1,000 employees per year, 1987-89 average)	67.6	0.5	28.4
Significant Limitations on Employment of Foreign Nationals	Some	Yes (10.0%)	No
Significant Restraints on Employment Terminations	Moderate	Yes	No
Employment Turnover Levels	Low	Mod. to High	Low to Mod.
Substantial Reengineering/Downsizing	Recently under way	No (But factory automation to improve qual.)	Well under way
National Minimum Wage, 1992	\$4.00 Nat'l \$4.30-5.30 provinces	\$0.57-\$0.69	\$4.25
Avg. Hourly Manufacturing Wage for Production Workers 1992	\$10.88	\$1.30	\$10.92
Fringe Benefits as a Percent of Straight-Time Salary (Avg. including mandatory and customary)	33.0%	80.0%	28.0%
Mandatory Overtime Pay for Hourly Workers	Yes (lmt'd to 8 hrs./week min 1.5 x salary	Yes (2 x salary first 9 hrs, 3x salary after 9 hrs and on holidays	Yes (1.5 x salary and 2 X on holidays
Geographic Variation in Avg. Wages/Salaries	Moderate	Slight	Substantial

Source: The Wadley-Donovan Group, Inc. 1993

Appendix 4

Forecast Growth Rates for 136 Manufacturing Industries and Groups

Appendix 4

Forecast Growth Rates for 136 Manufacturing Industries and Groups

SIC	Industry	1994 Shipments	Growth Rate 1993-94		Growth Rate 1987-94	
			%	Rank	%	Rank
20	Food & kindred products	355.553	1.0	113	1.1	69
2386	Leather and sheep-lined clothing	0.157	5.4	16	-3.5	127
2411	Logging	9.627	2.0	85	-1.8	120
2421	Sawmills and planing mills, general	17.066	2.0	86	-0.2	94
2431	Millwork	8.473	3.0	60	-1.4	112
2435	Hardwood veneer and plywood	2.048	2.5	73	-0.1	90
2436	Softwood veneer & plywood	4.524	1.5	105	-1.2	107
2451	Mobile Homes	5.765	9.4	4	5.0	16
2493	Reconstructed wood products	3.588	4.0	39	3.3	26
2511	Wood Household furniture	7.977	3.7	45	0.0	85
2512	Upholster household furniture	6.140	4.3	27	2.2	42
2514	Metal household furniture	2.000	2.8	68	-1.0	101
2515	Mattresses and bedsprings	3.030	6.4	8	3.3	25
26	Paper & allied products	118.600	3.0	61	1.2	67
2711	Newspapers	25.221	0.1	119	-3.3	126
2721	Periodicals	16.517	2.0	93	-0.7	97
2731	Book publishing	14.610	3.7	44	2.1	48
2732	Book printing	3.720	3.0	55	1.9	51
2741	Miscellaneous publishing	8.840	4.0	40	1.8	54
275	Commercial printing	47.651	2.7	69	0.9	73
2761	Manifold business forms	5.486	-5.0	129	-4.2	129
2771	Greeting cards	3.278	2.0	95	1.7	57
2782	Bankbooks & loose leaf binders	2.645	1.9	100	-1.3	110
2789	Bookbinding & related work	1.140	0.4	116	-0.4	95
2791	Typesetting	1.470	-1.7	123	-2.7	123
2796	Plate making services	2.800	3.5	47	2.4	37
281A	Ind. inorganic chemicals, except pigments	20.437	1.2	108	2.3	38
2821	Plastics, materials & resins	30.473	6.0	11	2.2	45
2822	Synthetic rubber	4.363	3.0	62	4.1	19
2833	Medicinals and botanicals	5.429	1.9	101	7.1	10
2834	Pharmaceutical preparations	35.710	2.0	89	1.5	60
2835	Diagnostic substances	4.542	2.0	90	10.9	3
2836	Biological products except diagnostic	2.408	1.9	99	5.9	13
2841	Soap and other detergents	15.216	2.0	92	4.0	20
2842	Polishes and sanitation good	5.575	1.4	107	0.0	85
2843	Surface active ingredients	2.722	2.0	98	-1.4	113
2844	Toilet preparations	16.438	2.0	91	1.7	56
2851	Paints & allied products	11.677	2.5	76	-1.2	108
2873	Nitrogenic fertilizers	2.549	2.0	88	0.6	80
2874	Phosphatic fertilizers	4.203	-4.8	128	1.4	63
2879	Agricultural chemicals, nec	7.249	2.5	77	2.0	50
2891	Adhesives and sealants	4.604	3.5	49	-0.2	93
2911	Petroleum refining	127.601	1.0	114	1.1	68
3011	Tires and inner tubes	11.153	1.0	112	1.0	72
3069	Fabricated rubber products, nec	6.170	3.0	64	2.3	40
308A	Misc. plastic prod.'s, exc. bottles/plumb.	68.040	5.0	19	2.2	41
3088	Plastics plumbing fixtures	1.161	4.0	31	7.3	8
3111	Leather tanning and finishing	2.202	6.0	9	-0.1	91
3142	House slippers	0.256	-1.9	124	1.4	62
3143	Men's footwear, except athletic	1.719	2.0	82	-2.9	124
3144	Women's footwear, except athletic	1.063	3.0	59	-3.0	125
3149	Footwear, except rubber nec	0.198	1.0	110	-10.2	136
3151	Leather gloves and mittens	0.132	0.8	115	-4.7	130
3161	Luggage	1.018	0.1	120	1.3	64
3171	Women's handbags and purses	0.384	3.5	48	-5.0	131
3172	Personal leather goods, nec	0.239	-5.2	130	-6.9	135
3211	Flat glass	2.386	2.0	84	-0.9	100
3241	Cement, hydraulic	3.944	2.0	96	-1.3	111

Appendix 4 - Continued

SIC	Industry	1994 Shipments	Growth Rate 1993-94		Growth Rate 1987-94	
			%	Rank	%	Rank
3253	Ceramic wall and floor tile	0.835	3.0	66	2.2	43
3261	Vitreous plumbing fixtures	0.693	2.5	72	-1.9	121
3275	Gypsum products	3.267	1.6	104	2.9	30
331A	Steel mill products (SIC 3312,15,16,&17)	59.780	2.5	71	2.3	39
3431	Metal sanitary ware	0.754	1.9	102	-0.9	98
3432	Plumbing fixtures and trim	2.100	2.9	67	-1.6	117
3441	Fabricated structural metal	7.847	-2.0	125	-1.4	114
3451	Screw machine products	3.322	6.0	12	2.4	364
3452	Bolts, nuts, rivets and washers	5.329	4.0	38	0.7	77
349A	Valves and pipe fitting (SIC 3491, 3494)	7.210	2.5	74	0.5	82
3523	Farm machinery and equipment	8.333	2.5	75	2.8	32
3524	Lawn and garden equipment	4.921	2.0	97	1.0	71
3531	Construction machinery	11.305	4.0	37	-1.7	119
3532	Mining machinery	1.360	3.0	58	-1.6	116
3533	Oil & gas field machinery	3.355	3.1	54	3.0	27
3541	Machine tools, metal cutting types	3.636	12.8	1	1.9	52
3542	Machine tools, metal forming types	1.542	3.6	46	1.4	61
3544	Special dies, jigs tools & fixtures	8.986	4.0	35	2.5	33
3546	Power-driven hand tools	2.459	5.1	17	1.9	53
3548	Welding apparatus	2.140	3.9	42	0.2	84
3552	Textile machinery	1.150	3.0	56	-1.1	104
3554	Paper industries machinery	1.715	3.9	43	-1.2	109
3555	Printing trades machinery	3.130	1.8	103	1.3	65
3556	Food products machinery	2.025	4.1	30	0.4	83
3562	Ball and roller bearings	3.706	4.5	23	-0.1	89
3565	Packaging material	2.753	3.9	41	3.3	24
357A	Computers/peripheral(SIC 3571,72,75, 77)	66.200*	5.9*	14	2.5*	35
3585	Refrigeration and heating equipment	18.029	5.0	18	0.8	74
3612	Transformers, except electronic	3.301	3.3	52	0.0	85
3613	Switch gear and switchboard apparatus	4.577	3.0	63	-1.0	102
3621	Motors and generators	7.040	4.5	24	0.6	79
3625	Relays and industrial controls	6.882	4.0	34	1.7	55
3631	Household cooking equipment	3.270	3.1	53	-0.5	96
3632	Household refrigerators and freezers	4.060	4.4	26	2.1	49
3633	Household laundry equipment	3.530	4.0	33	2.2	44
3634	Electric housewares and fans	3.460	2.4	78	2.9	28
3635	Household vacuum cleaners	1.870	3.0	58	5.1	15
3639	Household appliances, nec	3.020	4.1	29	3.3	23
364A	Lighting fixtures (SIC 3645,3646,3648)	6.425	6.6	7	0.5	81
3643	Current-carrying wiring devices	4.297	4.2	28	1.6	58
3644	Noncurrent-carrying wiring devices	2.471	0.3	117	-2.3	122
3651	Household audio and video equipment	8.656	2.0	83	5.6	14
3661	Telephone and telegraph apparatus	17.400	-6	122	-0.1	92
3663	Radio and TV communications equipment	18.400	2.2	79	3.7	22
367	Electronics components and accessories	93.767	11.1	2	9.3	4
3711	Motor vehicles and car bodies	145.800	5.7	15	1.3	66
3715	Truck trailers	3.587	-3.8	126	0.6	78
371A	Automotive parts and accessories	107.158	7.7	5	2.1	46
3721	Aircraft	36.630	-11.3	134	-0.9	99
3724	Aircraft engines and engine parts	13.350	-20.0	135	-5.8	133
3728	Aircraft parts and equipment, nec	12.555	-24.3	136	-5.0	132
3731	Shipbuilding and repairing	7.831	-6	132	-1.2	106
3732	Boat building and repairing	3.300	5.9	13	-6.7	134
3751	Motorcycles, bicycles and parts	1.906	2.6	70	8.7	5
3761	Guided missiles and space vehicles	24.081	4.9	22	1.6	59
3764	Space propulsion and parts	3.717	-5.3	131	0.7	75
3769	Space vehicle equipment, nec	1.980	-3.9	127	7.6	7
3812	Search and navigation equipment	27.570	-6.6	133	-3.8	128
3821	Laboratory apparatus and furniture	1.650	4.5	25	-1.0	103

Appendix 4 - Continued

<u>SIC</u>	<u>Industry</u>	<u>1994 Shipments</u>	<u>Growth Rate 1993-94</u>		<u>Growth Rate 1987-94</u>	
			<u>%</u>	<u>Rank</u>	<u>%</u>	<u>Rank</u>
3822	Environmental controls	2.072	1.0	109	0.0	85
3823	Process controls equipment	5.679	5.0	21	2.5	34
3824	Fluid meters and counting devices	1.996	1.0	111	11.4	1
3825	Instruments to measure electricity	8.285	4.0	36	1.0	70
3826	Analytical instruments	5.210	6.0	10	6.0	12
3827	Optical instruments and lenses	2.280	4.0	32	2.9	29
3829	Measuring and controlling devices, nec	4.198	2.0	94	2.9	31
3841	Surgical and medical instruments	11.769	7.0	6	6.1	11
3842	Surgical appliances and supplies	14.448	10.0	3	7.9	6
3843	Dental equipment and supplies	1.847	3.5	50	3.8	21
3844	X-ray apparatus and tubes	3.279	5.0	20	11.3	2
3845	Electromedical equipment	5.799	0.2	118	7.1	9
3851	Ophthalmic goods	2.294	2.0	87	4.5	18
3861	Photographic equipment and supplies	20.200	2.0	81	0.7	76
3911	Jewelry, precious metal	3.775	3.0	65	-1.1	105
3931	Musical equipment	0.730	0.0	121	-1.5	115
394A	Dolls toys and games (SIC 3942,3944)	4.262	2.0	80	2.1	47
3949	Sporting and athletic good, nec	7.178	3.4	51	4.9	17
3961	Costume jewelry	1.233	1.5	106	-1.7	118

Source: U.S. Department of Commerce, International Trade Administration

Appendix 5

Executive Order 12788 and 12.607 Community Planning Assistance Program Summary

- (13) Secretary of the Treasury;
- (14) Secretary of Veterans Affairs;
- (15) Chairman, Council of Economic Advisers;
- (14) Director of the Office of Management and Budget;
- (17) Director of the Office of Personnel Management;
- (18) Director of the United States Arms Control and Disarmament Agency;
- (19) Administrator of the Environmental Protection Agency;
- (20) Director of the Federal Emergency Management Agency;
- (21) Administrator of General Services;
- (22) Administrator of the Small Business Administration; and,
- (23) Postmaster General

(b) *Chairman.* The Secretaries of Defense, Commerce, and Labor shall rotate on a yearly basis, as chairman of the Committee.

(c) *Vice Chairman.* The Assistant Secretary of Defense who oversees the Department of Defense's Office of Economic Adjustment shall serve as vice chairman of the Committee. The vice chairman shall chair the Committee in the absence of both the chairman and the chairman's designee and may also preside over meetings of designated representatives of the concerned executive agencies.

(d) *Executive Director.* The head of the Department of Defense's Office of Economic Adjustment shall provide all necessary policy and administrative support for the Committee and shall be responsible for coordinating the application of the Defense Economic Adjustment Program to Department of Defense activities.

(e) *Duties.* The Committee shall:

(1) Advise, assist, and support the Defense Economic Adjustment Program;

(2) Develop procedures for ensuring that State, regional, and community officials and representatives of organized labor in those States, municipalities, localities, or labor organizations that are substantially and seriously affected by changes in Defense expenditures, realignments or closures, or cancellation or curtailment of major Defense contracts, are notified of available Federal economic adjustment programs; and,

(3) Report annually to the President and then to the Congress on the work of the Economic Adjustment Committee during the preceding fiscal year.

Sec. 5. Responsibilities of Executive Agencies.

(a) The head of each agency represented on the Committee shall designate an agency representative to:

- (1) Serve as a liaison with the Secretary of Defense's economic adjustment staff;
- (2) Coordinate agency support and participation in economic adjustment assistance projects; and,
- (3) Assist in resolving Defense-related impacts on Defense-affected communities.

(b) All executive agencies shall:

(1) Support, to the extent permitted by law, the economic adjustment assistance activities of the Secretary of Defense. Such support may include the use and application of personnel, technical expertise, legal authorities, and available financial resources. This support may be used, to the extent permitted by law, to provide a coordinated Federal response to the needs of individual States, regions, municipalities, and communities adversely affected by necessary Defense changes;

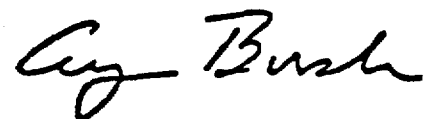
(2) Afford priority consideration to requests from Defense-affected communities for Federal technical assistance, financial resources, excess or surplus property, or other requirements, that are part of a comprehensive plan used by the Committee.

Sec. 6. Judicial Review. This order shall not be interpreted to create any right or benefit, substantive or procedural, enforceable at law by a party against the United States, its agencies, its officers, its agents, or any person.

Sec. 7. Construction. (a) Nothing in this order shall be construed as subjecting any function vested by law in, or assigned pursuant to law to, any agency or head thereof to the authority of any other agency or officer or as abrogating or restricting any such function in any manner.

(b) This order shall be effective immediately and shall supersede Executive Order No. ~~12049~~ 12049

THE WHITE HOUSE,
January 15, 1992.



Defense Economic Adjustment Programs

By the authority vested in me as President by the Constitution and the laws of the United States of America, including 10 U.S.C. 2391 and the Defense Economic Adjustment, Diversification, Conversion, and Stabilization Act of 1990, enacted as Division D, section 4001 *et seq.*, of the National Defense Authorization Act for Fiscal Year 1991, Public Law 101-510 and to provide coordinated Federal economic adjustment assistance necessitated by changes in Department of Defense activities, it is hereby ordered as follows:

Section 1. *Function of the Secretary of Defense.* The Secretary of Defense shall, through the Economic Adjustment Committee, design and establish a Defense Economic Adjustment Program.

Sec. 2. *Purpose of the Defense Economic Adjustment Program.* The Defense Economic Adjustment Program shall assist in the alleviation of serious community socioeconomic effects that result from major Defense base closures, realignments, and Defense contract-related adjustments, and the encroachment of the civilian community on the mission of military installations.

Sec. 3. *Functions of the Defense Economic Adjustment Program.* The Defense Economic Adjustment Program shall:

(a) Identify problems of States, regions, metropolitan areas, or communities that result from major Defense base closures, realignments, and Defense contract-related adjustments, and the encroachment of the civilian community on the mission of military installations and that require Federal assistance;

(b) Use and maintain a uniform socioeconomic impact analysis to justify the use of Federal economic adjustment resources, prior to particular realignments;

(c) Apply consistent policies, practices, and procedures in the administration of Federal programs that are used to assist Defense-affected States, regions, metropolitan areas, and communities;

(d) Identify and strengthen existing agency mechanisms to coordinate employment opportunities for displaced agency personnel;

(e) Identify and strengthen existing agency mechanisms to improve reemployment opportunities for dislocated Defense industry personnel;

(f) Assure timely consultation and cooperation with Federal, State, regional, metropolitan, and community officials concerning Defense-related impacts on Defense-affected

communities' problems;

(g) Assure coordinated interagency and intergovernmental adjustment assistance concerning Defense impact problems;

(h) Prepare, facilitate, and implement cost-effective strategies and action plans to coordinate interagency and intergovernmental economic adjustment efforts;

(i) Encourage effective Federal, State, regional, metropolitan, and community cooperation and concerted involvement of public interest groups and private sector organizations in Defense economic adjustment activities;

(j) Serve as a clearinghouse to exchange information among Federal, State, regional, metropolitan, and community officials involved in the resolution of community economic adjustment problems. Such information may include, for example, previous studies, technical information, and sources of public and private financing;

(k) Assist in the diversification of local economies to lessen dependence on Defense activities;

(l) Encourage and facilitate private sector interim use of lands and buildings to generate jobs as military activities diminish; and,

(m) Develop ways to streamline property disposal procedures to enable Defense-impacted communities to acquire base property to generate jobs as military activities diminish.

Sec. 4. *Economic Adjustment Committee.*

(a) ***Membership.*** The Economic Adjustment Committee ("Committee") shall be composed of the following individuals, or a designated principal deputy of these individuals, and such other individuals from the executive branch as the President may designate. Such individuals shall include the:

- (1) Secretary of Agriculture;
- (2) Attorney General;
- (3) Secretary of Commerce;
- (4) Secretary of Defense;
- (5) Secretary of Education;
- (6) Secretary of Energy;
- (7) Secretary of Health and Human Services;
- (8) Secretary of Housing and Urban Development;
- (9) Secretary of the Interior,
- (10) Secretary of Labor
- (11) Secretary of State;
- (12) Secretary of Transportation;

12.607 MILITARY BASE REUSE STUDIES AND COMMUNITY PLANNING ASSISTANCE

(Community Planning Assistance)

FEDERAL AGENCY: OFFICE OF ECONOMIC ADJUSTMENT,
OFFICE OF ASSISTANT SECRETARY OF DEFENSE
(FORCE MANAGEMENT AND PERSONNEL), DEPART-
MENT OF DEFENSE

AUTHORIZATION: Defense Authorization Act, 10 U.S.C. 2391.

OBJECTIVES: To assist State and local governments conduct military
base reuse studies and resolve serious community economic prob-
lems resulting from: Military base closures, openings, and realign-
ments. To conduct community impact planning that will be benefi-
cial to the Department of Defense and the affected jurisdiction.

TYPES OF ASSISTANCE: Project Grants.

USES AND USE RESTRICTIONS: DoD funding may be provided for
military base reuse studies required for reuse of former military
property. DoD may provide community planning assistance fund-
ing through a cooperative agreement or grant for planning activi-
ties considered beneficial to DoD and the affected community.
Activities include, but are not limited to: Staffing, operating and
administrative costs; travel; public information; and general or spe-
cialized community impact studies conducted by contractors or
State or local government employees.

ELIGIBILITY REQUIREMENTS:

Applicant Eligibility: An applicant may be eligible for DoD funding
for military base reuse studies if the Secretary of Defense has an-
nounced that the local military installation is a candidate for clo-
sure or that a final decision has been made to close the installation;
and, if one of the following actions is proposed or actually oc-
curred: 1) Increased activity: (a) the assignment of more than
2,000 military, civilian and DoD contractor personnel to a new or
expanded installation; or (b) the assignment of more military, civil-
ian, and contractor DoD personnel than the number equal to 10
percent of employment in counties or independent municipalities
within 15 miles of the installation, whichever is lesser; or 2) de-
creased activity: from the realignment or closure of a military in-
stallation. Additionally, the Secretary of Defense must make a de-
termination that the action is likely to impose a significant impact.
DoD funds may be provided only if other Federal, State or local
resources are not adequate. State or local governments, regional
organizations composed of State and local organizations, and Feder-
ally Recognized Indian Tribes located within the 50 States, the
District of Columbia, the Commonwealth of Puerto Rico and
Guam are eligible if the above statutory criteria are met.

Beneficiary Eligibility: State and local governments, regional orga-
nizations composed of State and local governments, or Federally
Recognized Indian Tribes that represents the impacted area.

Credentials/Documentation: Documentation that: 1) The Defense
action has or will occur and that it has imposed or is likely to
impose a substantial and serious impact; 2) other Federal, State, or
local resources are not adequate; 3) the threshold criterion of the
legislation has been or will be met; the community planning will
be beneficial to DoD and the affected community; and 4) there is
an immediate and substantial need for the funding.

APPLICATION AND AWARD PROCESS:

Preapplication Coordination: Requirements should be discussed with
other Federal and State agencies to ascertain if funding is avail-
able. This program is excluded from coverage under E.O. 12372.

Application Procedure: The standard application forms required by
32 CFR Part 278 must be used for this program. Applications and
supporting documentation should be submitted to the Director,
Office of Economic Adjustment, OASD (FM&P), Pentagon,
Room 4C767, Washington, DC 20301-4000.

Award Procedure: Applications are approved by the Director, Office
of Economic Adjustment, in consultation with the Military De-
partment involved.

Deadlines: None.

Range of Approval/Disapproval Time: 90 days.

Appeals: None.

Renewals: None.

ASSISTANCE CONSIDERATIONS:

Formula and Matching Requirements: This program has no statutory
formula. A minimum of 25 percent should be obtained from non-
federal sources, in the form of cash.

Length and Time Phasing of Assistance: Up to 1 year. Funds are dis-
bursed quarterly or as required. Funds should be expended during
the grant period.

POST ASSISTANCE REQUIREMENTS:

Reports: Quarterly financial and progress reports are required.

Audits: In accordance with the provisions of OMB Circular No. A-
128, 'Audits of State and Local Governments,' State and local
governments that receive financial assistance of \$100,000 or more
within the State's fiscal year shall have an audit made for that
year. State and local governments that receive between \$25,000
and \$100,000 within the State's fiscal year shall have an audit
made in accordance with Circular No. A-128, or in accordance
with Federal laws and regulations governing the programs in
which they participate.

Records: In accordance with 32 CFR Part 278.

FINANCIAL INFORMATION:

Account Identification: 97-0100-0-1-051.

Obligations: (Grants) FY 91 \$1,541,795; FY 92 est \$4,000,000; and
FY 93 est \$4,000,000.

Range and Average of Financial Assistance: \$100,000 to \$200,000;
\$150,000.

PROGRAM ACCOMPLISHMENTS: In fiscal year 1991, 39 communi-
ties received planning assistance funds. It is estimated that 25 new
communities will receive funds in fiscal year 1992.

REGULATIONS, GUIDELINES, AND LITERATURE: OMB Circular
No. A-128 and A-87, 32 CFR Part 278 and Part 280, Subpart F,
Appendix C.

INFORMATION CONTACTS:

Regional or Local Office: Office of Economic Adjustment, OASD
(FM&P), Western Region, 7500 Sand Point Way, NE., Seattle,
WA 98115. Telephone: (206) 524-1845.

Headquarters Office: Director, Office of Economic Adjustment,
OASD (FM&P), Pentagon, Room 4C767, Washington, DC 20301-
4000. Telephone: (703) 697-9155.

RELATED PROGRAMS: 11.307, Special Economic Development and
Adjustment Assistance Program—Sudden and Severe Economic
Dislocation and Long-Term Economic Deterioration; 12.600,
Community Economic Adjustment; 14.218, Community Develop-
ment Block Grants/Entitlement Grants; 14.219, Community De-
velopment Block Grants/Small Cities Program; 93.032, Communi-
ty Services Block Grant—Discretionary Awards.

EXAMPLES OF FUNDED PROJECTS: Funds were provided for
reuse planning of closing bases.

CRITERIA FOR SELECTING PROPOSALS: Magnitude of impact,
statutory compliance, immediacy of need, benefits to the nation,
DoD and the affected community and reasonableness of proposed
level of funding considering proposed work program.